Oil, Paint and Drug Reporter.

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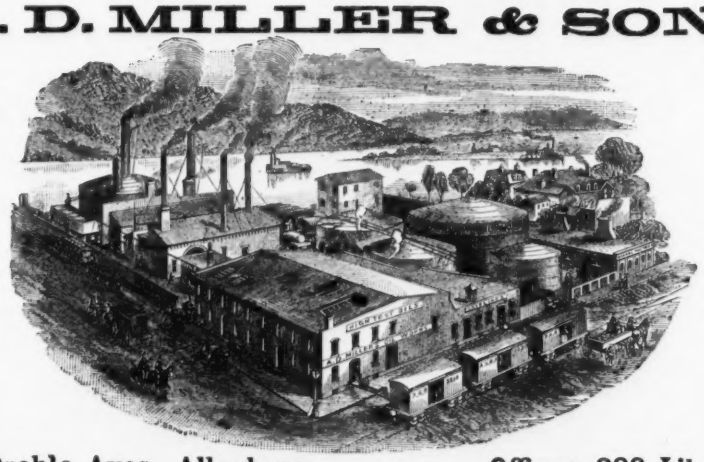

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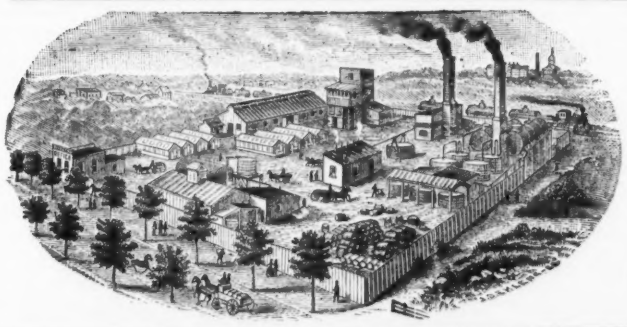

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(Continued on page 20.)

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WEDNESDAY, JULY 13, 1887.

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COMPARATIVE PRICES.

Following are the prices at this date during the last three years, of leading articles in the lines we report. A comparison with our market reports to-day will be found interesting as showing the present level of values.

	1886	1885	1884
CHEMICALS.			
Bleaching Powder	1 46	1 55	2 10
Caustic soda, 70 p. c.	2 50	2 55	2 95
Caustic soda, 60 p. c.	2 70	2 80	3 10
Sal soda	85	95	1 10
Soda ash 48 p.c. carb.	1 40	1 40	1 60
Soda ash 48 p.c. caust.	1 28	1 30	1 45
Soda ash 48-58 p.c. N C.	1 24	1 25	1 50
Soda alkali 58 p.c. B M	1 28	1 35	1 60
Soda Nitrate	2 32	2 10	2 15
Brimstone	$21 30	$22 25	$24 50
Cream tartar	34¼	33¼	31
Muriate of potash	1 68	1 67½	1 65
Chlorate of potash	16¾	16¾	14¾
Kainit	$6 80	$6 75	$7 60
PAINTS.			
White lead in oil	7	5 68	6¾
Litharge	5¼	5	5¼
Paris green	16	16	16½
Orange mineral	8	7¾	7¾
Ven. red, English	1 40	1 40	1 30
Ven. red, American	1 00	1 13¾	1 20
Barytes	18 50	18 00	17 00
Whiting, com'l	36	37½	40
DRUGS.			
Opium	$2 75	3 47½	$4 20
Morphine (dom)	2 10	3 20	3 25
Quinine, German	80	57½	1 15
Quinine (dom)	58	60	1 23½
Cinchonidia (dom)	12	14	50
Alcohol	2 07	2 10	2 17
Borax, City	7¾	8	9½
Beans, tonka(Ang)	1 72	1 60	2 00
Cubebs	95	70	70
Cuttlefish	13¾	15½	18½
Glycerine (Am)	15¾	14¾	19
Oil, castor (City)	17	17	18½
Oil, codliver, Nor.	30 00	28 00	45 00
Quicksilver	51	42	34½
Oil, bergamot	2 25	1 80	1 50
Oil, cassia	72	80	85
Oil, cubebs	6 00	6 50	6 50
Oil, lemon	2 00	70	1 00
Oil, peppermint (tins)	3 00	3 90	3 00
Oil, sassafras	34	42	46
Aloes, cape	7	8¼	10¾
Asafœtida	11½	12	18
Gum arabic, 1st picked	82½	50	36
Gum arabic, sorts	40	26	21
Camphor (bbls)	23	17¾	18
Shellac, D C	17	26	24
Senna, Alex Nat'l	32	11¼	11
Gentian root	4¾	4¾	8
Ipecac	85	75	75
Canaryseed, Smyrna	2⅝	2⅝	2⅝
Caraway seed, Dutch	10¼	11	6¾
Coriander, English	4½	5¾	7
Hempseed	2⅝	3¼	4
Mustardseed, Cal. yel.	5½	5	5
Mustards'd, Trieste, br.	5½	5¼	5
Rapeseed, English	3½	4¼	4⅞
Rapeseed, German	3⅝	4	4¾
OILS			
Linseed, (dom)	42½	49	57
Cottonseed, prime S Y.	34	33¼	40
Olive, Sicily	74	75	86
Palm, prime	5¼	6¾	8¼
Cocoanut, Ceylon	5⅜	6¼	7⅝
Lard, prime city	53½	51	58
Menhaden, prime crude	22	27	31
Whale, bleached winter	42	55	63
Sperm, bleached winter	92	98	1 10
Paraffine, 25 gravity	9¼	10¼	12⅛
Neutral, 34 gr. b'leas.	16	18	20
Black, 29 gr. 15 deg.	8¾	9	9½
Cylinder, 600 deg.	17	20	23
Oil cake, western	24 75	28 00	32 00
Spirits turpentine	33¼	28½	31¼
DYESTUFFS.			
Cochineal, Teneriffe S.	31½	29	21
Cutch	6¼	5¾	6¼
Gambier	4¾	4⅜	5⅛
Indigo, Bengal h grade	1 50	1 40	1 50
Bichromate potash	9⅞	9⅞	10¼
Prussiate potash, yel.	20¼	21	23¾
Sumac, Sicily prime	80 00	84 00	95 00
Starch, West'n corn bls	2¼	2⅜	3¼

WEEKLY REVIEW.

An easier tendency in the money market during the week has been a marked feature. This is attributable to the increased supply of money made available by the July disbursements, the favorable rates of the domestic exchange in New York and other western cities, the arrival of several shipments of gold from Europe, and the easier tendency of foreign exchange.

Commercial paper has ruled dull, and discounts have been nearly nominal. We quote 60 to 90 days indorsed bills receivable at 6 per cent. discount for first-class; 4 months at 6 to 7, and good single named paper at 7@10.

The following are the rates of exchange on New York: Savannah, par, selling ⅛@¼ premium. Charleston, buying par@⅛; selling, 3-16@¼ premium. New Orleans commercial, $1 per $1,000 discount, bank $1 50 per $1,000 premium. St. Louis, 50c per $1,000 premium. Chicago, 25c per $1,000 premium. Sales for commercial paper are only nominal. We quote 60 to 90 days' indorsed bills receivable at 6 per cent. for first-class; 4 months' commission house names at 6@7, and good single names—jobbers—having four to six months to run, 7@10. Foreign exchange is a trifle easier.

Sterling, 60 days, nominal	$4 84	@ —
Sight, nominal	4 85½	@ —
60 days, actual	4 82½	@4 83
Sight, actual	4 84	@4 84
Cable Transfers	4 84½	@4 85
Commercial 60 days	4 80½	@4 81½
Paris, 60 days	5 23½	@5 22½
Sight	5 21¼	@5 21⅜
com, 60 days	5 25⅝	@5 24⅝
com, sight	5 23¾	@5 22⅞
Antwerp, 60 days	5 26¾	@5 25⅞
Swiss 60 days	5 23¾	@5 23⅛
Sight	5 21¾	@5 21¾
Reichmarks (4) 60 days	95⅝	@95¾
(4 sight	96⅛	@96¼
4 com 60 days	94⅝	@94¾
(4) com, sight	95⅝	@95¾
Guilders, 60 days	40@	40 1 16
Sight	40 13 16	@40¼
com 60 days	39¾	@39 15 16
com sight	39 15-16	@40
Copenhagen Stockholm and Christiana krons, 60 days	26 11-16	@26¾
sight	26 15-16	@27

SUMMARY.

While there was a decrease in Oil field operations during the past month, an increase in production is to be noted, consequently the bullish influence of the producing interest failed to materialize. The Alcohol market is in an unsettled condition pending the result of the distillers' consideration of a plan of organization, which contemplates a large decrease in the production and enhanced prices; the project is well under way and definite results are expected in less than a month. Last fall and this spring there was a good deal of speculation in Nitrate of Soda, the belief being that the market had then touched bottom; the result is that the market is now over stocked and with plenty of sellers and no buyers, the prospects are that prices will go lower than they have ever been before. Glucose manufacturers are complaining of hard times, not on account of lack of demand or consumption, but because of low prices over which they have no control, owing to the cheapness of cane sugar. Reasons are given why there is no boom in the Fish Oil market in answer to a correspondent who believes in looking on the sunny side of the situation.

A disastrous fire in Clarendon, Pa., played havoc with oil interests centered in that town. The injunction against the Stock Exchange to prevent the removal of tickers from the Consolidated Mining and Petroleum Exchange, has been continued. Great danger has been predicted in the natural gas belt as the result of present operations, but this will have no effect on the work of development. The cheap oil problem is considered. Petroleum is represented to be a growing rival of coal gas. Petroleum fields of Burmah are reviewed by a writer of authority. Several descriptive articles are given of the early history of the oil region, the most interesting one of which is "Pithole pictures." Thrilling marine scenes in oil, is the title of another readable article. The world's production of sponges is compared. A writer estimates the amount of copper in barytes. An announcement is made regarding the annual meeting in Boston of the wholesale druggists. Clays are chemically considered. A remarkable rock salt deposit is being mined in southern Louisiana. A foreign article is translated on essential oils and essences and their preparations. The treatment of sizing by sea salt is referred to. Another installment is published on soap and soap making. The subject of Turkey red oils is treated at some length. Basic slag is receiving more attention as a fertilizer. Adulterated pepper here and abroad is fully considered. The subject of orange ozo dyes is continued. In our correspondence column will be found another letter on commercial union with Canada.

THE GLUCOSE INDUSTRY.

There is general complaint among glucose manufacturers that the low prices have nearly crushed the industry, and they are looking around for some means to improve it. They have a combination on price, but that only prevents selling below cost of production, as they have to be guided by the value of cane sugar in marketing their products. The cheapness of cane sugar causes the mischief, and how to remedy the situation is a problem which now excites considerable attention. One way of solving it is to improve the quality of glucose and have it come up to the standard of cane sugar in sweetness; experiments are now being made with that end in view—in fact, they have been in progress for some time without satisfactory results thus far, however. A manufacturer, in talking upon this subject, entertained a hope that glucose could be made of the same sweetness as regular sugar, and said that was about the only redeeming feature of the business. We presume it is customary to look on the dark side to discourage competition. If no profits are being made from the business, the same concerns seem to be eager to supply the demand and are working their usual capacities—probably to keep in trim for better times. The glucose producers are apparently not manifesting much anxiety over the success of saccharine. They claim that the latter is too costly to interfere with their trade, although claimed to be three hundred times sweeter than sugar. They look for a combination of the two articles, which event would advance the market for glucose. It is acknowledged that saccharine is meeting with a sale among druggists and in channels foreign to glucose, and that by degrees it may become more popular and cheaper by improved methods of production. The consumption of glucose is reported to be extending to a large extent, especially among confectioners, and that it enters the composition of most of the candies offered the public. In late years the business has been concentrated until there are only four independent refineries, and although the production is still excessive, no effort is being made to regulate it.

THE DECLINE IN NITRATE OF SODA.

The past few weeks have witnessed a remarkable decline in the price of nitrate of soda. At the beginning of that time there was a small stock in store here, which was concentrated in a few hands, and held at two and thirty one-hundredths cents per pound. Then came heavy arrivals, one vessel after another adding its quota to the stock, and prices went off rapidly, falling first to two cents, and then to one and eighty one-hundredths, while some individual transactions have taken place, we understand, at one and three-quarter cents from vessel. The fact is the market is largely overstocked. During the fall and winter the price was deemed so low as to warrant large purchases on speculation, and not only were the regular consumers large buyers of forward deliveries, but many outsiders were drawn in under the belief that handsome profits would result from their venture when the consuming season began. The results, as shown, have been directly contrary to their expectations, and they are now anxious to get out before the risk of heavy losses is incurred. With many sellers and no buyers, the market presents an easy appearance, and much lower prices in the near future are not improbable. The disruption of the syndicate of producers early in April leaves each producer free to increase his output as much as he may see fit, and as the tendency has always been to bring the production up to the full capacity of the world's consumption, the prospects of a material improvement in the statistical situation is not very flattering. The situation are well set forth in the semi-annual review of the market recently published by Mr. F. B. Nichols. He says:

"Toward the close of last year, the producer's combination showed signs of weakness, and symptoms of disruption were manifested, but a compromise was effected by which the syndicate was continued to the end of March on the basis of a large increase of production. It was evident that the stronger refiners controlled, and the conviction grew steadily that the discontent would end in their withdrawal from the compact. Such was the result early in April after repeated efforts to harmonize. The advantages of a fixed supply are obvious, and it would be better for the markets if the combination continued, but the experience of the refiners does not justify the expectation that it will be attempted again. The year opened with a good demand from consumers, showing small reserve stocks, and justifying the belief that the large increase of deliv-

eries in the last half of 1886 was fairly indicative of the growth of consumption which is most active in that portion of the year. This demand continued, and, owing to the light shipments in the last quarter, the spot market fell into the control of a few hands, and the price was carried from 2 to 2 20. The same movement from same causes was going on in Europe on a large scale, and prices were carried in Hamburg and Havre to a point which permitted exports from here to the extent of 23,629 bags, and left in the hands of a few holders a small stock in warehouse at an agreed price of 2 30 in April, and sustained for the most part until within a few weeks. The strength of the spot market affected the whole line to arrive, and prices rose from 1 75 to 2 20, according to position. Although shipments were delayed and several vessels were distressed and others kept back by calms, all favoring circumstances to the small clique of holders, yet it was known that a remarkable business had been done on spread charters, and sooner or later a change would come when there would be more sellers than buyers. Within the last fortnight the arrivals at this port alone were over 66,000 bags, and the price fell from 2 30 ex store to 1 85 ex vessel. The dissolution of the producers' combination was anticipated and had no effect upon the markets, but a large expansion of production was necessary to meet the wants of Europe, and in consequence of this demand prices have been sustained in Valparaiso.

The deliveries at San Francisco for the last six months were 37,000 bags. The total deliveries in this country were 261,476 bags, against 179,386 same time in 1886; 147,248 in 1885; 205,348 in 1884; 212,332 in 1883, and 238,000 in 1882. In Europe the deliveries were 2,355,000 bags, against 2,107,500 in 1886; 2,267,475 in 1885; 2,431,800 in 1884; and 2,024,000 in 1883, making total for the world the first half of 1887 2,616,476 bags, against 2,286,886 same time in 1886; 2,354,723 in 1885; 2,637,148 in 1884. The quantity to arrive at Atlantic ports is 275,500 bags against 280,200 in 1886, making total visible supply 332,435 bags, against 338,973 in 1886; 272,262 in 1885; 318,384 in 1884; 226,216 in 1883; 241,800 in 1882, and 202,844 in 1881. The quantity to arrive in Europe is 930,000 bags, against 652,500 in 1886; 730,000 in 1885; 1,275,000 in 1884 and 1,224,000 in 1883, making the visible supply there 1,065,000 bags, against, 1,507,500 in 1886; 1,417,000 in 1885; 1,665,000 in 1884, and 1,528,000 in 1883. The total visible supply for the world, including 11,000 on the way to San Francisco, is 1,408,435 bags, against 1,558,473 in 1886; 1,706,762 in 1885; 1,983,384 in 1884, and 1,754,216 in 1883."

THE MONTHLY FIELD REPORT.

It was stated in producing circles that the June report of field operations would make a showing that would or should have a bullish effect on the speculative market. The result of operations in the various fields has, however, tended the other way, both the new production and the new ventures showing an increase. It was believed that the shutdown movement in the Taylorstown district would extend and that therefore the production of the Washington field would show a decrease. As we have already stated, the shutdown movement was a half-hearted affair and had no beneficial effect, in fact the new production of the Washington field for the month of June shows an increase of over two thousand barrels over that of the month of May. The number of wells completed during June show an increase of thirty-three per cent., which is pretty good evidence that the producer is not yet entirely discouraged by the low prices of oil, notwithstanding that he takes every opportunity of insuring the scouts and other newspaper correspondents that with oil at sixty cents there is no money to be made by the producer. A feature worthy of note in the developments of the month is that while the number of new wells shows an increase of thirty-three per cent., the number of dry holes shows a decrease of about fifteen per cent., and while this of itself does not prove that the average cost of a producing well is less than formerly, it does show that the average for the month of June was smaller than that for May and that if the business paid in May it certainly paid better in June. In the Bradford district, where twenty wells were completed during the month of June, not a dry hole is recorded.

The situation, as shown by the number of new rigs in course of erection and the number of wells in process of drilling at the close of the two months, makes a somewhat different showing, and were it not for the fact that the production shows an increase and that some of the new wells show remarkable staying qualities, this comparison might be considered decidedly bullish in its tendency. The new rigs and wells drilling both show a decrease of about sixteen per cent. The greatest decrease in the number of wells drilling is noticeable in the Middle Field, while the Washington, Bradford and Clarion fields show an increase, and in these latter and in Butler, the drill will no doubt be pushed with vigor during the present month. The situation as shown by the comparisons of new rigs and drilling wells does not indicate the probable or even possible field work for July. A strike of one or two gushers in a certain section would stimulate new ventures in that section, and a few more such strikes as the later ones of McKeown on the Martin farm in the Washington field and the Phillips Brothers in the Reibold district, would set the drill working with vigor irrespective of the price of certificates. Dollar oil would no doubt be a powerful stimulant to the drill, but if operators wait for that their tools will become coated with rust. Assure the driller that he will secure a hundred barrel well in a certain location and he will push the drill whether the price of certificates is sixty cents or less, and there are at present no evidences that the driller is not anxious to increase the number of holes in the ground, even should the market go to fifty cents.

THE ALCOHOL MARKET.

Since the dissolution of the distillers' pool there has been a gradual and steady decline in the price of alcohol, beginning at two dollars and twenty cents per gallon. At the present time the quotation is about two dollars and three to two dollars and five cents, but the market is in an unsettled condition and likely to advance or decline at any time, according to circumstances. The most important of these is the success or failure of the attempts now making to organize the distilling interest on the "Trust" system. How far these efforts will prove successful it is difficult at this time to determine. There is a very strong feeling in favor of the plan, but those who have undertaken to put it through find that the matter is a very large one to handle. It is a work of time which will require careful weighing and deliberation, and its sponsors are not disposed to use undue haste, though realizing the necessity for prompt action.

Regarding the plan or plans under consideration nothing definite has been announced. In a general way it is understood that the proposition to reorganize the distilling interests contemplates an organization on the plan of the different "trusts" now in existence. The details of this plan are now being arranged, and it is expected that it will be in operation in less than a month. From one source, which, however, cannot be considered official, we learn that nine of the principal distillers are behind the project and have pledged several millions of dollars to forward it. The producing capacity will be largely decreased by closing the bulk of the establishments now in operation, leaving distillers at Cincinnati, Chicago, Peoria, and possibly one or two other places, to supply the market. The proprietors whose places are closed will be paid a certain percentage of the profits of the "Trust," based on their capacity. All this, however, is largely a matter of conjecture, as the organizers of the proposed "Trust" are careful that their plans shall not be made public prematurely; but enough is known to warrant the assertion that the project has taken definite shape, and that at no very distant day the market will again be under the control of a strong organization that will at once proceed to adjust prices on a profitable basis.

The distillers are entirely dependent upon the home market for an outlet for their alcohol production. According to Mr. G. Speckel, in his circular of recent date, reviewing the export trade of the past three months, they are to-day in the same position they have occupied for a number of years past. "That is to say, they are unable to offer alcohol for export as low as the distillers of other countries, unless they make up the difference between cost and selling price by means of some pool, and thereby obtain an offset to the various export premiums and differential duties their European competitors enjoy." If, therefore, the plan of organization now under consideration is adopted, the distillers will be independent of the export trade, and it will cease to be a factor in the situation. The export trade in alcohol has dwindled to very small proportions. The authority above quoted has this to say regarding it:

"The exportation of bonded alcohol during the last three months (April-June) have amounted to 3,948 barrels, which brings the total since the beginning of the season, October 1st, to 9,589 barrels. The lowest and highest prices during the season were: October, 26@32c; November, 25@32c; December, 25@28c; January, 25@28c; February, 24@25c; March, 24c; April, 23@24c. About the middle of May, when it became evident that the distillers could no longer get any bonus on export goods from their association, a few lots, parts of car loads and some resales then on the market, were disposed of at gradually advancing prices. To-day the market is merely nominal; there is no demand; the price is about 35c."

BOOMING THE FISH OIL MARKET.

The following criticism and suggestion have been received from an esteemed correspondent:

Editor OIL, PAINT AND DRUG REPORTER:

It looks to us that your comments on fish oil are entirely in favor of the consumer, and we fail to see the reason why, with each edition of your paper, you continue to use the failure of the combination as a lever to keep the market of fish oil far below a paying price. So far this season we cannot hear of a single factory making a penny, and many have already closed up, disgusted. Why not make such fact the issue and let the "rulers of their roosts" crow over their individual results. It is in your power to give the fish oil market quite a push, and we sincerely trust you will take the stand for better prices.

This letter gives us an opportunity to state that the REPORTER'S mission is not to make or break a market, but to report it as it actually exists, and while it may be in our "power to give the fish oil market quite a push," as intimated in the foregoing note, it would be a gross injustice to our constituents to give it an artificial appearance in order to benefit one class of our readers at the expense of others. Our correspondent is correct in the statement that the market reviews have been in favor of the consumer, because the natural tendency of the market has been in that direction recently, owing to the limited demand.

The "combination" feature of the menhaden trade still seems to be a "thorn in the flesh." We have been told that the REPORTER was responsible for the effort to form a pool, as it continued to agitate co-operation and succeeded in influencing the Menhaden Association to favorably consider the project, the progress of which caused a large home and foreign demand for oil. Now we are charged with writing against the interests of the fishermen, because it is found necessary to refer occasionally to the "combination" which only existed in name, and that this fact is used as a "lever" to keep down prices. The REPORTER occupies neutral ground and being disinterested, except so far as regards a faithful performance of duty, is neither on the "bear" nor "bull" side, although being the official paper of the United States Menhaden Oil and Guano Association and other trade organizations. When a market is weak and nominal, buyers want to be so informed, and when prices are strong and tending higher, sellers are interested in having the market so reported, but when a trade paper undertakes to present markets in a false position, its usefulness is at an end. There are times, however, when journals are imposed upon by truth-stretchers, whose selfishness get the better of their judgment and whose acts of misrepresentation may continue without suspicion for a while, but the discovery is sure to come and the experienced reporter will thereafter know how to treat their comments.

This paper endeavors to give impartial and full reports in all departments and we are always pleased to receive suggestions of improvement or criticisms from any reader. Our correspondent in this instance fully believed that we were leaning too much on the "bear" side of the fish oil market, and he writes to direct our attention to the matter. His suggestion to improve the tone does not mean for the REPORTER to prostitute its mission by giving fictitious strength to the market, but to investigate and ascertain if the feeling is not actually firmer than we report. He entertains a contrary view to the REPORTER; he has a right to be heard, and his opinion is accepted among others in determining the actual market value and pulse of the trade. We hope there is a better prospect for fish oils, as the owners of factories are discouraged and working at a loss, which fact has been repeatedly pointed out in these columns. It is about time to expect a demand from domestic manufacturers and if holders are firm in their views, the market may assume a much stronger tone.

TRADE ITEMS.

A drug store owned by Lemon & Foster at Hurley, Wis., was destroyed by fire; loss $8,000.

Mr. Colin R. Strong, representing the Thompson & Bedford Co., at Manchester, Eng., is in the city.

Frederick N. Woodward, glue manufacturer at Newton, Mass., is endeavoring to compromise with his creditors at ten cents on the dollar.

Mr. Herbert Morgan of the old firm of Joseph Morgan & Son, wick manufacturers of Manchester, Eng., is in the city and called at this office.

The National Oleine Soap and Chemical Company, limited, has begun business at Robelia, Pa., with a general depot at 104 Federal street, Allegheny.

The Cleveland firm of J. H. Morley & Co. has been incorporated under the name of the J. H. Morley Lead Co., and under the same management.

We were favored with a visit last week from Mr. John Rutschman, of Rutschman Bros., manufacturers of soap machinery in Philadelphia since 1841.

Mr, John L. London, formerly of the oil firm of E. T. Milliken & Co., New York and Boston, is now connected with the Arctic Oil Works of San Francisco where he will be pleased to serve his many friends as usual.

Negotiations for the sale of the Snyder & Holmes Paper Company to the Garrison, Chappell & Pirie Paper Company, St. Louis, Mo., were made last week by Mr. Holmes, manager of the former concern. The transfer took place July 1st.

The Triumph Bottle Stopper Company, at Baltimore, has been placed in the hands of a receiver, having become insolvent. The liabilities are about $14,000, and the assets consist of plant, valued at $1,000, and interest in patents and book accounts.

The Philadelphia Vinegar Association, formed recently by the manufacturers in that city, and the agents of outside houses represented there for the purpose, as stated, of advancing prices, has already made a failure of it, several large concerns declining to come in.

Mr. Ferdinand Muller, importer of druggists' and chemists' porcelain goods, has formed a partnership with Mr. Chas. Ritter, and the firm name has been changed to Ferdinand Muller & Co. Mr. Muller departed on the Elder last Saturday for Europe to remain two months.

Messrs. E. Henning and Geo. Lee have just arrived home from a season of recreation at Delaware Water Gap. Their visit probably accounts for the rumor that the residents of that vicinity were thinking of organizing a vigilance committee; they are not accustomed to the presence of New York brokers.

In answer to the many inquiries received at this office where to procure paint, oil and varnish cans, we refer our correspondents to The Lithograph Tin Ware Co., of 88 and 90 Cham-

plain street, Cleveland, Ohio. They are manufacturers, lithographers, japanners and decorators of tin cans for all purposes.

Melvin L. Fuller, dealer in painters' supplies at No. 2212 Third avenue, made an assignment Saturday to John P. Hunt, giving a preference to the latter for $1,301. He formerly claimed a stock of $9,000, but, becoming embarrassed, he sold out to Illsley, Doubleday & Co., June 14 Liabilities, $9,696; nominal assets, $4,601; actual assets, $4,468.

The Chamber of Commerce and Industry in Augsburg, Germany, has come to the decision to petition against the projected increase of 6 mks. upon the incoming tax of cottonseed oil. The soap manufacturers who employ this oil are already hard pressed by English competition. Instead of an increase, the Chamber of Commerce recommends a decrease in the tax of 4 to 2 mks.

The Standard Paper Company, of Milwaukee, Wis., made an assignment last week to J. E. Friend, who furnished a bond in the sum of $130,000. The liabilities are said to be far in excess of the assets, but the members of the company positively refuse to make any statements. The liabilities are said to be from $150,000 to $300,000, the assets from $50,000 to $100,000.

It is stated that oil of bay is extensively used in Switzerland by butchers to keep their shops free from flies, and that after a coat of this oil has been applied to the walls none of these troublesome pests venture to put in an appearance. This remedy has been tried and found effectual in the south of France in preserving gilt frames, chandeliers, etc., from becoming soiled.

The Western Flint Bottle Manufacturers' Association has about completed its preparations for the wage convention at Atlantic City on the 15th inst. It is stated that they will strenuously refuse to grant any advance, and will also ask reductions in several particulars, notably in the 10 per cent. paid for lettering bottles by the men, which the manufacturers will insist on being stricken out.

The proprietors of the Acme White Lead & Color Works of Detroit, have made arrangements to give their employes an excursion and picnic on Saturday July 16, at Sugar Island, Michigan. Complimentary tickets will be issued to the families of all employes and their friends. A brass and string band will accompany them and other preparations made to have a grand day of sport.

A dead whale was found fastened to the Pennsylvania freight pier, at the foot of Battery Park, in this city, one morning last week. It had drifted in with the tide and an examination disclosed the fact that it had been dead three weeks, which rendered it useless for commercial purposes. It measured 32 feet in length. A tug towed the huge carcass down the bay, and let it loose below Staten Island.

Archie L. Adams, a drug clerk, who is well known, was placed in jail last week on a charge of larceny. He was employed until recently by U. G. Wyncoop, a druggist in Allegheny, Pa. The other day Wyncoop discovered that he had been robbed by his former clerk. He made an information against him and a search warrant was issued. Upon searching his room a quantity of drugs was found and identified by Mr. Wyncoop as his property.

Nine retail druggists from Pittsburg Pa., and an equal number from Allegheny played an imitation game of base ball in the latter city a few days since, the like of which has never been witnessed. The Pittsburgers, as usual, were great on the bluff, and offered the Allegheny soda slingers bets of $5 to $1 that they could win blind-folded. The Alleghenies would not bet, but showed the bluffers where they were wrong, beating them by a score of 37 runs to 7 in five innings.

Charles T. Crane went to a drug store in Chicago last week, and while waiting for a prescription to be filled, it is said, was permitted to meddle with the chemicals. He endeavored to combine some chloride of potash with sulphur and oil and the stuff exploded, inflicting horrible injuries upon his body. Both arms and hands were torn and frightfully burned, and in the stomach and groin, where the greatest force of the explosion struck him, he was badly lacerated.

A special from Hot Springs, Ark, says: "A boon of big proportions has struck the new mining town of Antimony City, Sevier County, southwest of here. A company is now operating over $100,000 worth of machinery and is giving employment to more than one hundred men at the Antimony mines. The company is composed principally of Pennsylvania capitalists, ex-Gov. Curtin, ex-Congressman White, B. K. Jamison and Frank McLaughlin being among the number."

The Liebig Pharmacal Company, formerly at No. 78 Maiden lane, New York, and No. 774 Bedford avenue, Brooklyn, has been attached for $138 in favor of H. A. Batjer & Co. Both places of business have been closed for some time past, and no assets could be found. The company was incorporated in September, 1884, with a capital stock of $30,000, W. C. Jacobs being the manager. The concern lost money and it is said owes considerable for advertising, etc. Six weeks ago Mr. Jacobs claimed assets of over $7,500.

A number of importers and others doing business at the Custom House here recently petitioned the Secretary of the Treasury to order the Custom House closed at 1 P. M. on Saturdays. The matter was referred to Collector Magone, and he has made a report adverse to the petition. He says that in order to properly dispose of the Custom House business, without allowing it to fall in arrears, he needs the services of the Custom House officers and employes for the full six days of the week. Secretary Fairchild has therefore decided not to interfere with the present arrangement.

On another page of this issue will be found the advertisement of Messrs Magor Bros. & Co., 408 Produce Exchange, New York, and 12 Common street, Montreal, large importers and receivers of genuine Newfoundland cod oil, Norway and Newfoundland cod liver oil, Newfoundland steam refined seal oil, and fish oils of all kinds. They have long been considered as one of the leading firms in their business in North America. Their oils are warranted to be genuine. Correspondence is solicited, and prices and samples will be furnished to the trade on application.

The Oxford Copper and Sulphur Company, whose factory is located at Constable Hook, N. J., has gone into the hands of a receiver. It is one of the largest concerns of the kind in the world, having extensive mines and works in Canada and a capital of $1,000,000. The application for a receiver was made before the Chancellor by Schuyler B. Jackson on behalf of numerous creditors and stockholders. The Fidelity Title and Trust Company of Newark, of which ex-Chancellor Runyon is counsel, has been made receiver. The failure is believed to have been caused by the purchase of enormous quantities of copper at high rates which the recent shrinkage in price left on their hands.

Some experiments carried out on a large scale at Messrs. Walker, Palmer & Co.'s lead works, in Flintshire, Eng., with a view to utilizing electric currents in causing the deposition of the particles suspended in the lead fume, in accordance with the suggestion of Professor Lodge, have not been attended with the hoped-for success. A large Wimshurst induction machine, with four glass discs of five feet diameter, was erected, and the currents of electricity were carried from it to two wire gratings inserted a few feet apart in the main flue, which were of the size of the sectional area of the flue. It was hoped that the electricity in traversing the space between the gratings would, in accordance with the results obtained by Professor Lodge in his preliminary experiments, cause the deposition of the dust or fume; but this deposition did not take place, although the cause of the failure remains at present unexplained.

A London branch has been established by Messrs. Stallman & Fulton, to be under the management of Mr. Zach. Stallman, one of the youngest and most successful and popular salesmen on the road. He has filled with satisfaction every position in the above named house from errand boy, and now accepts a greater responsibility, having left on the City of Chicago last Saturday to meet his father, who has selected quarters for the branch office in the Dunster House, Mincing Lane. Zach's last trip on the road was quite an ovation and he departed with many tokens of esteem. His place as traveler is acceptably filled by Mr. J. A. Toy, formerly of W. H. Schieffelin & Co., and Billings, Clapp & Co. A great necessity existed for the London undertaking, and no doubt the growth of business will cause similar action to be taken in some other leading foreign markets.

WESTERN NOTES.

Special correspondence of the OIL, PAINT AND DRUG REPORTER.]

CHICAGO, July 9, 1887.

The only perceptible change to be noted in the Western linseed oil market is a decline in demand, which may be said to be incidental to the season. Inquiry from the East is also reported by crushers and brokers to have fallen off, and the margin between the quotations of western oil in the New York market and the ruling price here is not large enough to induce shippers to give the preference to the eastern over the home demand. Oil is purchasable today in Chicago in lots of five barrels, for city delivery, at 44c. This is the price however of but one local mill, so far as open quotations are concerned, all other holders demanding 45c and brokers generally reporting holdings firm at the latter figure. There does not appear to be any inherent reason why, in view of the undoubtedly light stocks at all manufacturing centers throughout the West, oil should not bring 45c in Chicago, and the fact that it is offered at lower prices is fairly attributable to the lack of harmony and the spirit of petty animosity and jealousy which has prevented crushers from obtaining better prices all through a season which might have proved far more profitable than it has. There is more or less inquiry heard for oil for August and September delivery, but inquirers seek to make contracts at present prices and manufacturers are not disposed to listen to any such propositions. Such unwillingness however is not to be altogether ascribed to an overweening confidence in higher prices, inasmuch as there is no general expectation that oil will go much, if at all, higher. It rests upon a broader view of the situation, that the sale of futures is a plain violation of sound commercial principles, inasmuch as its tendency is to unsettle values and render it difficult for manufacturers to avail themselves of the possible condition of the market after the deliveries are made. Moreover, crushers are rather looking for some revival of activity—in the local market at least—in view of the almost certain adjustment of the troubles underlying the great strike in the building trades, which for so many weeks has exerted so disastrous an influence on not a few branches of business in Chicago. Should their anticipations be realized, linseed oil will be undoubtedly firmer, if not higher.

Advices reached here from St. Louis report that market as being nominally one cent higher than Chicago. There is no active demand at that point however, and no special reason why oil should be higher there than here unless it is to be found in concert of action among manufacturers.

The outlook all through the west is too uncertain, as yet, to justify predictions. Too many contingencies (not the least of which is the seed crop) are to be taken into account to enable even the most sagacious observer to feel confidence in his forecast of the future. It seems probable, however, that the decline in flax (and notably in seed for future delivery), and a falling off in demand for oil indicate cheaper oil should receipts prove equal to those of last year.

FLAXSEED.

In the flaxseed market, the volume of business transacted has been about equal to that of last week. While the receipts show a slight falling off (being 30,661 bushels as against 31,450 last week and 44,637 one year ago) there has been a marked diminution in shipments. The latter have aggregated but 13,246 bushels, or 33,725 bushels less than those of a week ago. This discrepancy is to be accounted for by last week's shipment of seed previously stored, to which I alluded at the time. The large excess of receipts over shipments (16,325 bushels) indicates the absorption of a very considerable proportion of the seed arriving, by local crushers. The demand, however, neither from this source nor for shipping has been sufficient to restore tone to the market. Seed opened on Tuesday—after two working days in which no session had been held—at $1 10 and closed today at $1 12, but without a firm feeling being perceptible. Fluctuations during the week have been between these figures, but have not been pronounced. Only 58 cars have been inspected in (as against 68 cars last week), and offerings have been naturally far from large. Open sales have aggregated about 36 cars—including sales of bags—of cash seed, of which 28 cars have been of No. 1.

The speculative market has shown more activity, there having been apparently tolerably free orders to sell. September delivery has been dealt in most largely, sales having aggregated nearly 65,000 bushels. But one sale of July seed was made, 10 cars having changed hands on Wednesday. August delivery has been somewhat more in demand, about 19,000 bushels having been sold. October has been comparatively neglected, only one sale—5,000 bushels—having been effected. The free offerings of futures tended to depress prices, but a slight reaction was noticeable after Wednesday. Various theories are advanced for this, but the most rational explanation is to be found in the decrease in the number of sellers. It is confidently expected that new seed will begin to arrive before the close of next week and it is more than probable that we shall then witness a greater activity, with (perhaps) a more marked fluctuation in prices.

The crop prospects in the Northwest have improved during the week. Late private advices from Dakota report seed as looking far better since recent rains. In the vicinity of Canton the yield is expected to be about equal to that of last year, while around Akron, Yankton and Lesterville the falling off is variously estimated at from 35 to 50 per cent. From the best possible information at present obtainable the decrease in the Dakota crop will be material, noticeably in Hutchinson, Douglas, Charles Mix and Tottier counties, where it is said on apparently credible authority that the crop will fall from 50 to 75 per cent below that of 1886-7.

OILS.

The inquiry for cotton oil is very limited, although the quantity in sight in this market is becoming gradually but steadily reduced. Strictly prime crude is scarce and very little is offered. The same statement is measurably true of fine grades of refined oil, although there are qualities of the latter, made from crude not fully up to a first-class standard, which are being offered with more or less freedom at prices slightly below what may be called the "top of the market." These facts would seem naturally to point to higher prices, were it not for the disproportion between the market values of oil and tallow, which is so large as to tend to reduce the demand for the former to a minimum.

The situation in the market for lard oil remains practically unchanged. Prices remain about the same—53@55c—and the demand may be said to be normal merely.

The decrease in the output of oleo to which I referred a few weeks ago has received a check, owing to the large receipts of cattle of a far better quality. The production during the past week has been up to the average, and there does not appear to be any reason to expect any speedy well marked diminution. A careful estimate of the stocks in sight in this market places the total visible supply here at not more than 2,500 tierces. The speculative inquiry is even more marked than during the last fortnight. This circumstance may be best explained by cable advices from Holland, where July 4th was celebrated by Dutch churners by an average advance of about 5 florins, which was followed by a further rise of 2 florins on Wednesday. A natural decrease in inquiry resulted, and the demand during the latter half of the week showed a marked abatement, although still continuing good for grades known as Nos. 2 and 3, quotations for which are at present unusually high. The fact that sales abroad have aggregated about 4,000 tierces—an amount exceeding the week's exportations—is believed here to point to a continuance of a state of affairs highly gratifying to shippers.

PAINTS.

The past week has been an uneventful one in the paint trade. Business has been, on the whole, rather quiet, and unless the local demand should show some revival of activity during the next fortnight there do not seem to be any grounds on which to anticipate renewed liveliness until the opening of the fall trade, when the annual inquiry from manufacturers of agricultural implements will be heard. White lead is heavy, metaphorically as well as literally. Nominal quotations remain the same, but there are rumors (not, however, directly traceable to any authentic source) of isolated sales at rates slightly below open prices. A commentary, more or less striking, on the practical operations of the defunct white lead combination is afforded by the fact that western corroders, as a rule, express themselves as satisfied with the result of the past season's business, notwithstanding the variation between this year's prices and those heretofore inflexibly (?) fixed by the pool.

PIG LEAD.

There has been but a very limited inquiry heard for pig lead during the week, and the little demand reported has been confined to car lots, and the market closes to-day dull and weaker. There has been a noticeable lack of seekers for spot lead, and sales have been confined to July delivery, by which is meant the last half of the current month. For this $4 40 was paid on Thursday, and the market may be said to be at about these figures. The fact that the decline in prices has not served to stimulate inquiry would seem to indicate that the present condition of the market is the legitimate result of the dullness incident to the season. Corroders are buying nothing and purchases generally are made with a view of meeting pressing wants. Brokers do not seem to anticipate a speedy return to the high quotations which ruled a few weeks ago, but some of them are anticipating a more active inquiry on the part of lead pipe men if the labor troubles can be, as they seem about to be, satisfactorily adjusted. Manufacturers of pipe in Chicago at least are not as a rule carrying stocks sufficiently large to last them much beyond the 15th inst., and even a temporary revival of activity in the building trades could not but result in an improved demand for lead. Stocks in the West are beyond question rather light, but I am of opinion that even an increase in inquiry will not soon result in much higher prices than those now ruling.

DRUGS.

The week has witnessed a further advance in opium, which is now selling in this market at $5, the figures named by me some weeks ago as likely to be reached before July 15, and some Chicago jobbers are advising their customers that the drug will probably soon reach $6. A more conservative, and apparently more rational, survey of the situation fails to disclose sufficient grounds for hazarding such a prediction. The advance here is undoubtedly traceable to the course of the New York market, and there is an impression among some large western jobbers that the rise in the East is partially due to speculative action. In the absence of any extraordinary demand, stocks in the west are thought to be sufficient to meet the probable inquiry, and dealers manifest a disposition to be a little chary of purchasing at present prices. Quinine continues weak, and there is some disposition to smile at the failure of the recent attempt to induce higher prices for the foreign sulphate. Chicago jobbers report a rather brisk inquiry for quinine during the last few weeks at the present low prices. This demand has evidently been to some extent anticipatory, and it is quite within the bounds of possibility that when the usual midsummer advance occurs, dealers through the west will be found so well stocked that they will be practictlly out of the market as buyers. With the exceptions above indicated, prices remain uniform and steady. Business while quiet, is good for the season, and jobbers report a most gratifying increase in the volume of trade during the first six months of the year as compared with the corresponding period in 1886.

CALUMET.

According to intelligence received by the London *Times* from the Transcaucasus a new market has been discovered for Russian petroleum. A company, consisting of several owners of large camel caravans, has been formed at Baku for the purpose of introducing petroleum into Persia by overland route via Mugan. Several caravans have been sent but on each occasion the oil failed to reach its destination, being rapidly bought up at Mugan, and, in consequence, it is now intended to increase the size of the caravans to 500 camels each.

CORRESPONDENCE.

Commercial Union With Canada.

MONTREAL, July 7, 1887.

Editor OIL, PAINT AND DRUG REPORTER:

We beg to acknowledge receipt of your communication of the 16th ultimo, and while we would be pleased to see a closer commercial union between our respective countries, we fear the problem would be a too difficult one to solve. Taking the most sanguine view possible, we cannot encourage you in the idea that it is possible to bring about the change you seem to desire. It certainly would benefit some people, but, on the other hand, an equal number would suffer. We, as importers, would be among the latter, and do not feel inclined to take the initiative in a movement involving so many changes. BELLHOUSE, DILLON & CO.

CUSTOMS DECISIONS.

Cocoa Butter—The assessment by collector at Philadelphia at 25 per cent ad valorem on cocoa butter, imported by Croft & Allen per British Princess March 25, 1887, is affirmed. (June 28).

Artificial Indigo—The assessment by collector at New York at 25 per cent ad valorem on so-called artificial indigo, imported per De Ruyter, May 18, 1886, and returned as colors is affirmed. The appraiser reports the merchandise as being Prussian blue and has been in use as such for more than 160 years and that to give it the name of artificial indigo is but an attempt to evade the payment of duties as all attempts to produce a substance which could displace indigo have failed up to the present time. (June 23.)

PETROLEUM NOTES.

The United German Petroleum Works Society has made a new deep boring, 60 meters deep, which produces 7 barrels of raw oil in 12 hours, to the value of 175 marks.

Saturday the work of putting in oil burners under the boilers at the electric light station, in Lima, O., was finished, and Lima oil is now being used as fuel instead of coal.

L. Emery, Jr., & Co. are extending their pipe line in all directions over the Quintuple tract. The main runs up Shepard run and will be extended into the Song-Bird developments.

Although our Lima contemporary is printed on pink paper it is not a pink of propriety. Copying our editorials and crediting them to "an Eastern exchange" is not doing the square thing.

Papers are now in preparation for an immense ejectment suit on behalf of the Corn planter Indians. It is understood they will try to gain possession of the land on which Oil City, Pa., and Salamanca, N. Y., stand.

The Common Council of Elizabeth, N. J., have appointed a committee to investigate charges that the Tidewater Oil Company had attempted to influence by money the votes of Aldermen in relation to a franchise sought by them.

It is stated that oil has been discovered near Nacogdoches, Tex., where wells were driven by the New Orleans Petroleum Prospecting Company. Six wells were driven, or bored, 800 feet deep, and another 300 feet deep, but oil is found at a depth of 85 feet.

The Oil City *Derrick* celebrated the quarter centennial of Oil City on the Fourth by issuing a twenty-four page paper brim full of interesting matters, historical, statistical and anecdotal, from which we shall cull for the delectation of our readers. The *Derrick* did itself proud.

The end of the oil workers' strike at the Point Breeze refineries leaves between three and four hundred men out of employment, that number of new men having been taken on, who will retain their places. The Philadelphia and Atlantic refining companies started in full operation Monday morning.

Last Wednesday as Andrew Green, an employe of the oil refinery at Lima, O., was working in one of the tanks in which a quantity of gasoline was being treated, an explosion occurred and Green was covered with burning fluid, a part of it falling on his back and shoulders, burning him frightfully. He cannot recover.

Several years ago a "Holsteinische Oelgruben Gesellschaft" was established in Hamburg, the object of which was to obtain the petroleum which had been discovered in various parts of Holstein. A good deal of interest in this venture was shown, not only in Hamburg but also in other parts of Germany. An extra-ordinary general meeting of the shareholders was recently called for the purpose of winding up the company's affairs.

The drillers at Howard's second well in the heart of Port Huron, Mich., struck the gas reservoir at a depth of only 340 feet last week, and a rush of gas followed. A high pipe is in the well, and the light shines clear and bright over the whole central part of the city. It is estimated by competent parties that the gas from this well alone is sufficient to light at least one-half of the city or furnish fuel for a dozen large establishments.

The announcement is made that W. H. Elkins, P. H. Widener, of Philadelphia, and David Reighard, late of the Empire refinery, are heading a scheme to start a refinery in Pittsburg, with a capacity of 12,000 barrels per week. It is also understood that the company has secured one half interest in the Empire Electric Carbon works, formerly owned exclusively by Mr. Reighard and will continue the business on an extended scale.

The following is an abstract of bids opened June 30 for the U. S. army, for furnishing 100 000 gallons of mineral oil: Standard Oil Company, Louisville, Ky., 13 33-100c per gallon; Bear Creek Refining Company, Pittsburg, Pa., 13 32-100c per gallon; Peaslee-Gaulbert Company, Louisville, Ky., 13 32-100c per gallon. The contract was awarded the Peaslee-Gaulbert Company, the Standard Oil Company, tied with them in their bid, having signed a waiver in favor of the former.

Remittiturs from the Court of Appeals in the case of the Buffalo Lubricating Oil Company, limited, against the Standard Oil Company and the Buffalo Lubricating Oil Company against Hiram B. Everest, et. al., were filed at Buffalo last Friday. The judgment of the Court of Appeals is that judgment is affirmed, with leave to appellants to withdraw its demurrer and answer the complaint upon payment in twenty days of plaintiffs' costs subsequent to the interposition of the demurrer.

Considerable excitement is being created in commercial circles in the Rocky Mountain region, over oil production in Colorado. Hon. James H. Platt, manager of the oil works in Florence, Col., reports that there are now 20 wells being worked, producing 700 barrels per day. This is sufficient to supply the demand of this section of the west at a figure lower than can be met by eastern companies. This will shut out of the Colorado market all eastern oil, and the question now with Colorado producers is how to handle their product to the best advantages.

A Pittsburgh paper says the sheet iron ceiling in the oil exchange is completed, the unsightly scaffolding removed, floors swept, etc., and the institution is once more looking handsome. The works of fine art that graced the structure are, of course, forever covered from view of the fraternity. Neither is this regretted, since the loss in this respect means safety from falling plaster that made life on 'change extremely hazardous for a year or more. The cost of the new ceiling was $430, against $5 000 for the pictures and plaster from which the former one was constructed.

According to the Oil City *Derrick* 53,000 wells have been drilled in Pennsylvania and New York since the discovery of petroleum at a cost of $200,000,000. These wells have produced 310,000,000 barrels of oil, which was sold at the wells for $500,000,000. This represented a profit to the producer of $300,000,000. The amount of oil exported is placed at 6,231,102,923 gallons. In the pool at Washington county alone $3,200,000 have been expended in machinery and drilling. This does not include the millions represented in the natural gas industry. Independent of the oil business, there are about $50,000,000 invested in natural gas plants in Pennsylvania.

Some capitalists in Charleston, S. C., have organized a company to bore for natural gas, and the contract was let some weeks ago to an experienced firm of Ohio men. The city is believed to lie directly in the course of the natural gas vein, and about three miles away, years ago, in digging a well, gas was discovered that has since supplied heat, light and fuel for its fortunate possessor. On this account the projectors are very sanguine and being determined men of capital they have posted upon the derrick that was finished June 30, a large cloth banner that has emblazoned on its sides the homely but expressive words, "Gas or Bust."

Commodore Harry Remson Rich, of the Consolidated Bay Ridge Yacht Club, and member of the Consolidated Stock and Petroleum Exchange, is the proud owner of the handsomest yacht of the squadron, named the Rita R. One day last week the Commodore invited a few friends from the Exchange on a pleasure trip to witness the fine sailing qualities of his yacht and incidentally to show off his skill as a navigator. The masterly manner in which he made the buoy off the anchorage at Bay Ridge was the admiration of a host of friends and admirers of the gallant Commodore who had assembled on the bluff overlooking the bay to witness the return of the voyageurs.

The development of Wyoming's oil fields promises to bring to that rapidly developing territory a large and increased revenue. It has been known for years that petroleum exists there in what seems practically inexhaustible quantities, but its utilization and refinement is an industry comparatively new. The figures furnished by a correspondent of the *Bee* show that this one commodity, which has been so long neglected, will prove one of the most valuable of the many natual resources of the west. The development is just begun. Other wells in different districts will be opened, and the revenue from the oil alone will furnish startling statistics for Eastern capitalists within the next ten years.—*Omaha Bee.*

Oil men are said to be greatly excited over reports which have reached Toledo of a wonderful oil volcano just discovered in the forests of Wood County, a few miles from that city, near the village of Cygnet. Strenuous efforts have been made by the owners of the well to keep the matter quiet. It is reported to be throwing torrents of oil a hundred feet in the air, and a hundred feet of casing has been thrown a long distance. Trees have been uprooted and the largest rocks and stones forced from their positions. The crater, or mouth of the gusher, is many feet across. For several days it has been impossible to reach the gusher, which is now beyond control. Oil is flowing in all directions, and it is feared that the petroleum may yet be set on fire by sparks from trains on the Toledo, Columbus and Southern Road. Many oil men have started to visit the volcano and see if some means cannot be devised to save the crude oil which is running to waste. The derrick has been submerged by the debris thrown up by the well. It is believed that the volcano is caused by the displacement of a reservoir of oil a thousand feet deep, and the unusual pressure of natural gas has forced the oil upward and caused it to flood the country. The well is totally unlike anything ever before discovered in the Pennsylvania or Ohio fields.

MISCELLANEOUS.

Annual Meeting of the National Wholesale Druggists' Association.

The time has been changed for the next annual meeting of the National Wholesale Druggists' Association to August 23, 24, 25 and 26—one week later than arranged for at the last convention. The drug trade in Boston are making extensive preparations for the event and announce a reception to the ladies on the evening of the opening day. The committees appointed to entertain the guests are as follows:

EXECUTIVE COMMITTEE,
Nathaniel J. Rust, Chairman.

Harvey S. Sears, Sec.	Chas. C. Goodwin, Treas.
Joseph Burnett	G. D. Gilman
Solomon Carter	Chas. I. Hood
E. Waldo Cutler	John D. Morton
Thomas Doliber	A. L. Murdock
Erastus H. Doolittle	John L. Whiting

COMMITTEE ON FINANCE.
Joseph Burnett, Chairman.

Geo. G. Kennedy	Andrew G. Weeks

COMMITTEE ON PLACE OF MEETING.

A. L. Murdock, Chairman,	Horace L. Bowker

COMMITTEE ON TOASTS AND SPEAKERS.
G. D. Gilman, Chairman

Chas. Richardson	Albert C. Smith

COMMITTEE ON PRINTING.
Thomas Doliber, Chairman.

Rob't M. Burnett	W. G. Shillaber

COMMITTEE ON LADIES' RECEPTION.
Chas. I. Hood, Chairman

E. P. Bryant	Horace S. Fowle
Joseph Burnett	John A. Gilman
Fred L. Carter	Warren B. Potter
Frank A. Davidson	A. E. Richardson

Chas. A. West.

COMMITTEE ON INVITATION.
E. Waldo Cutler, Chairman

Wm. B. Bird	Theo. Metcalf
John C. Howe	Harvey S. Sears

COMMITTEE ON FLORAL DECORATIONS.
John L. Whiting, Chairman

Rhodes Lockwood	Edmund M. Wood
Andrew Blume	Wm. C Pope

COMMITTEE ON RECEPTION.
Solomon Carter, Chairman

A. E. Bigelow	F. D. Hardy, Jr
Rob't M. Burnett	Wm. A. Rust
Wm. J Cutler	F. B. Shedd
Chas. C. Goodwin	A. Thompson
J. M. Grosvenor	Geo. R. White

COMMITTEE ON BANQUET.
E. H. Doolittle, Chairman

Frederick Ayer	Chas. I. Hood
Albion R. Clapp	W. H. Pinkham
Thomas Doliber	John P. Putnam
Seth A. Fowle	O. E. Weld

COMMITTEE ON EXCURSION.
John D. Morton, Chairman

Luther Adams	A. L. Murdock
Wm. Agge	D. G. Tyler
A. R. Clapp	Chas. A. West
Edward C. Graves	I. H. Wiley

John H. Woolrich.

New Business Enterprises.

It is reported that the Standard Charcoal Iron & Chemical Co., of Nashville, Tenn., will erect a charcoal furnace and chemical plant at Sheffield, Ala.

Edward Bull and Robert T. Bull have chartered the E. Bull Medicine Co., of Louisville, capital stock $5,000, to manufacture medicines.

Negotiations are being made with Georgia parties for the erection of a 20-ton fertilizer factory at Oxford, Ala.

The Georgia Sawdust Chemical Co. has been incorporated to manufacture oils, turpentine, etc., from sawdust, at Brunswick, Ga.

Benjamin S. Wettermark, of Nacogdoches, is leasing oil lands in Palestine, Texas, with a view to developing.

Maddox, Rucker & Co., have secured a controlling interest in the Southern Phosphate Works at Atlanta, Ga., and will spend about $25,000 in enlarging and improveing them.

The Tilden Paper Company has been organized at Watertown, N. Y. It will build a paper mill on the Black River, between Watertown and Brownville. Among the stockholders are Tilden & Anderson, George W. Knowlton, F. A. Hinds, S. F. Bagg, Edward Stirling and Nathaniel P. Wardwell.

Recent Fires.

By the large fire at Clarendon, Pa., last week three drug stores were destroyed owned by Dr. Russell and Messrs. C. S. McCandless and A. S. Knight. Their losses are placed at $2,500 each, with light insurance.

The works of the Conesus Lake Salt and Mining Company, situated at Lakeville, at the foot of Conesus Lake, N. Y., were totally destroyed by fire on July 6. There were over five thousand barrels of salt in the store-room at the time. The Board of Directors were holding a meeting when the fire broke out.

The loss will not fall far from $50,000. Insurance to the amount of $34,000 had been placed on the works and contents, but the policies had been allowed to remain in the hands of the agents of the company, and as a consequence the loss will be total. Two-thirds of the stock of the company is held by the heirs of Joel Stone, of Livonia.

At Montreal, Quebec, July 5, fire in the premises of Fenwick & Slater, oil merchants, caused a loss of $8,000; insured.

At Lyons Falls, N. Y., July 6, Shue & Apple's paper mill was burned. Loss, $8,000; insurance, $4,000.

Fire on July 7 in the Western Paint and Roofing Company's building at Cincinnati, caused a loss of $28,000; well insured.

The wholesale drug house of W. S. Pearce, at Lamar, Col., was destroyed by fire July 7. Loss $18,000; insurance, $8,000.

A one-story frame shed used for storing oil by Wm. Gray & Son, at Thirtieth & Locust streets, Philadelphia, was set on fire July 7 by one of the workmen, who attempted to fill a lamp. The place was destroyed.

Danger Predicted in the Gas Belt.

A correspondent of the Cincinnati *Commercial* predicts an overwhelming disaster to the sections of country occupied by the natural gas wells, and is so positive in his assertions that he urges the calling of an extra session of Congress to take some action in the matter. Boring for natural gas should be prohibited by stringent laws. The good people of Ohio and Indiana while trying to develop the gas magazines, do not take time to consider that they are toying with a force that may destroy this country and themselves. The danger that impends is well known to scientists.

Two hundred years ago in China there was just such a craze about natural gas as we have in this country to-day. Gas wells were sunk with as much vim and vigor as the Celestials were capable of; but owing to a gas explosion that killed several millions of people and tore up and destroyed a large district of country, leaving a large inland sea, known on the maps as Lake Foo Chang, the boring of any more gas wells was then and there prohibited by law. It seems, according to the Chinese history, that many large and heavy pressure gas wells were struck, and in some districts wells were sunk quite near to each other. Gas was lighted as soon as struck, as is done in this country. It is stated that one well with its unusual pressure, by induction or back draught, pulled down into the earth the burning gas of a smaller well, resulting in a dreadful explosion of a large district, destroying the inhabitants thereof. Lake Foo Chang rests on this district. The same catastrophe is imminent in this country unless the laws restrict further developments in boring so many wells. Should a similar explosion occur there will be such an upheaval as will dwarf the most terrible of earthquakes ever known. The country along the gas belt from Toledo through Ohio, Indiana and Kentucky will be ripped up to the depth of 1,200 to 1,500 feet and flopped over like a pancake, leaving a chasm through which the waters of Lake Erie will come howling down, filling the Ohio and Mississippi valleys, and blotting them out forever. Some prompt action should be taken at once to prevent this catastrophe.

Disastrous Fire in Clarendon.

One of the most disastrous conflagrations of the many that have afflicted the oil regions broke out about nine o'clock, as the people in Clarendon were getting over the exertions of the Fourth and were retiring to their homes, tired and ready to rest. It was soon seen that the conflagration was in progress in the old Brown mill, which had been thoroughly saturated with oil, and which blazed up so quickly that it could not be stopped. The fire broke out simultaneously in the Weaver Hotel and in Brown Bros.' planing mill. The meager water supply gave out, and the people became horrified as they realized their helplessness. Appeals for help were immediately sent out to Warren and the surrounding country. When the Warren Fire Department responded it was discovered that the hose was not brought along. When valuable time was lost and the department was in working order, the flames had encroached upon the pumping station and the water works were burned. A stream which ran near the depot was sought, but it gave but a meager supply.

The atmosphere became so charged with heat that a number of oil tanks in the upper part of the town exploded and rivulets of fire ran through the streets and wound their serpentine course under the buildings in all directions. High above the roaring of the flames were heard the cries of those looking for loved ones

Fortunately all had instinctively sought the hillside and but one person was burned. The telegraph and telephone offices were burned in the early stages of the conflagration. This left the people without means of communicating with the outside world. Several trains coming East which were made up of oil cars were stopped beyond the town.

The village is deserted, except by persons from abroad, attracted by curiosity. It is impossible to arrive at the losses, but it is pretty certain that these will reach $300,000. The heaviest losers are the oil well supply dealers. These are the Oil Well Supply Co., two stores; Jarecki Manufacturing Co. and Beecher & Copeland, and R. E. Townsend. The platform and goods, through the heroic efforts of Superintendent Charles Ellis, were saved. Except Kuhn's glycerine store, this is the only business house left standing in Clarendon. The dry goods and grocery houses came next in the scale of heavy losers. The business houses of Clarendon carried very little insurance, owing to the excessive rates. The dwelling-houses, where the risks were not assumed by the owners are in better shape with regard to insurance. Many of the sufferers will rebuild.

There was a strong suspicion that the fire was of incindiary origin. Tom Mahoney, of the Weaver House, in whose building the fire started, was charged with the crime and jailed. The fire broke out about 10 p. m., starting almost simultaneously at two places. Brown's mill, from which the city obtained its water, was first noticed to be on fire, then the flames were seen issuing from the roof of Mr. Mahoney's house. Mahoney's family at the time were on the front perch. The fire spread so quickly that those who were first in the building believed the fire was aided by oil or some equally inflammable substance. Mahoney at this time was on the street in a semi-intoxicated condition. Opinions are divided as to Mahoney's guilt.

The Stock Exchange Injunction Continued.

Charles G. Wilson as president of the Consolidated Stock and Petroleum Exchange, brought an action to enjoin the Commercial Telegram Company from removing its tickers from the floor of the Exchange and procured an injunction. Then to prevent the New York Stock Exchange from removing the instruments of the Commercial company from its floor, and thus prevent the opposition exchange from obtaining quotations, an injunction was obtained against the New York Stock Exchange.

Mr. Justice Dykman, of the Supreme Court, on Thursday last continued this injunction. He holds that there was a contract by correspondence between the vice-prtsident and manager of the Commercial company and the secretary or the Stock Exchange, under which the company introduced its quotation instruments into the Stock Exchange with its consent, and began the transmission of intelligence to the world of the transactions of the Stock Exchange, which afforded it all the necessary facilities for the sum of $18, 00 a year payable monthly in advance, With the knowledge of the Stock Exchange the Commercial company made contracts, one for five years, and no dissent or objection was expressed. The Stock Exchange threatened to banish the Commercial company from its premises if it supplied the quotations of stock transactions to the Consolidated Stock and Petroleum Exchange, with which it had made a contract. It desires to carry out that contract, but cannot do so unless it is protected from the threat of the Stock Exchange. If its supply of information from the Stock Board is withheld, its occupation is gone, the ailment upon which it exists is withdrawn and its death is impending.

CAN'T GO BACK ON THE AGREEMENT.

"The plaintiff," says Judge Dykman, "has secured the right to the quotations from the Commercial Company and the latter has secured the right to the quotations from the Stock Exchange. Both these rights are the subject of judicial protection, and the specific performance of the legal and equitable obligations of these parties should be commanded and enforced by the Court. Such a result gives evenhanded justice to all and is consonant with broad and expansive views and principles of equity. The New York Stock Exchange was organized for the facilitation of trade in securities and stocks, and bears some similitude to and possesses some of the attributes of a joint stock association. It is composed of individual brokers, who do business for other people, and the entire public may make sales and purchases at its Board by the employment of its members, and subject to no other restriction.

QUOTATIONS PUBLIC PROPERTY.

"The business transacted in its rooms differs from mercantile and commercial traffic, where property constitutes the basis of deal and bargain, because it is confined to evidences of title and indebtedness entirely. Yet the development of the immense resources of the continent and the formation of corporations for land carriage and water carriage have caused the issuance of stocks and bonds, which flood the whole country in search of a market, and float into the Stock Exchange of the great commercial metropolis in numbers almost countless. In that busy mart of trade, the diurnal sales of securities are very numerous, and the prices realized fix the values for the world.

"It is therefore the prices at which the sales are made which are affected with a public interest, but in such prices the public has a deep and abiding interest. * * * It seems to be within the constitutional authority of the courts of equity, in the silence of legislative enactment to compel and enforce the publicity of the quotations in subordination to the interests of the public."

The Cheap Oil Problem.

There is a feature in the new shut down in the Lima oil field which has been lacking in all former movements of this kind and which may possibly make it a success. There is only one buyer in the field—the Standard Oil Company. The officials of that corporation at a recent meeting with the Lima producers stated that they had 2,000,000 bbls. of Lima oil on hand which they did not know how to dispose of. All their efforts to make a merchantable illuminating oil had proved failures and they did not care to go on adding 20,000 bbls. a day—the present production of the field—to the stock on hand at any price, however small. This conclusion may make the shutdown a case of necessity.

The Standard officials in their conference with the Ohio oil producers also intimated what has already been suggested in other quarters, that future efforts to utilize the Ohio oil should be made in the direction of its use as a fuel instead of an illuminator. While it will furnish as much light as the Pennsylvania oil its offensive odor, all efforts to remove which have so far proved unavailing, renders it unsalable for that purpose. But it can be burned up, smell and all, furnishing a large amount of heat at a very small cost. People have hitherto been somewhat afraid of petroleum as a fuel, owing to its touch and-go inflammability, and this prejudice is the most serious drawback to its substitution for coal and wood. If consumers could once be convinced of its safety its use as a fuel would extend very rapidly.

At present some few experiments made by railway and steamship comanies in its use for steam-making purposes cover the efforts for its utilization as a fuel in any extended sense. Of these experiments that of the Pennsylvania railway, in using it as a fuel on a passenger locomotive, appears to have been entirely successful. It has also been successfully experimented with as a steamship fuel, but steamship proprietors or the insurance companies have not got rid of the fear that it might catch fire and burn up the vessels. The exceedingly low price of the Ohio petroleum will be likely, however, to induce both railway and steamship companies to take some risks in this direction, and especially as its use would do away with the cinder nuisance. There is quite an appreciable increase in its use as a summer fuel in household, but whether this increase actual or prospective, is likely to have any appreciable effect in disposing of the 20,000 bbls a day which the Ohio producers do not know what to do with, is doubtful.

If it can be used to make steam with on locomotives and steamships there is no reason why it cannot be used in manufactories for the same purpose. If the Ohio producers stop putting down new wells for awhile and spend a few months in inventing safe methods of utilizing their products as a fuel, then there is a chance that their oil, the abundance of which now makes them poor, may prove a source of wealth indeed.—*Philadelphia Times.*

Petroleum Fuel.

Discussing the petroleum fuel question, the *Railroad Gazette* says: "It should be stated here that the use of crude oil for fuel is not recommended for several reasons. First, crude oil at the same price per gallon is very much less economical than the reduced oil, because of the less weight. Second, the crude oil constantly gives off gases, which it would be almost impossible to hold, and dangers from explosion would result. Third, the crude oil is very much more offensive so far as odor is concerned. Fourth, the relative proportions of carbon and hydrogen in the reduced oil only vary one or two per cent from these proportions in the crude oil, so that although crude oil is much more inflammable than the reduced oil, its heat producing power, pound for pound, is very little if any in excess of the reduced oil, and as above stated the reduced oil weighs from one to two pounds more per gallon than the crude oil. Should any considerable demand spring up for fuel oil it is entirely possible that changes will have to be made in the present methods of refining petroleum, the distillation being managed so as to take out from the crude oil the products easiest removed and most valuable to the refiner, and leaving the residue for fuel. If the figures given above are correct, it would seem that the future of the petroleum industry in the United States is largely in the hands of the refiners. If they manage their refining in such a way as to turn a portion of the product into fuel, at a price at which this fuel can compete with coal, the reaction on the other products of the petroleum industry will unquestionably be great. This is especially true of the paraffine industry and its allied products. A consumption of 10,000 barrels per day of reduced oil would unquestionably raise the price of the paraffine products within the first month, and this new outlet for what has up to the present time been somewhat of a burden, cannot but be welcomed by the petroleum industry.

Facts About Oil.

BY JOHN P. ZANE.

There have been drilled about 53,000 wells in New York and Pennsylvania from 1859 to January, 1887, at an expense of $200,000,000, which have produced 310,000 000 barrels of oil. This oil was sold at the wells for $400,000,000, leaving a profit to the producers of $200,000 000. There have been exported 6,231,152,923 gallons of oil, which was sold for $847,229,352. The cost of transportation from wells to seaboard in 1862 was $7 45 per barrel. In 1865 the first year pipe lines were used, the cost was as follows:

Pipe laid from Pithole to river	$1 00
Freight on river to Pittsburg	1 50
Wharfage at Pittsburg	25
Freight from Pittsburg to New York	2 24
Total cost, Pithole to New York	$4 99
Pipe line from Pithole to Miller Farm	$1 00
Barreling at Miller Farm	25
Freight to Corry—O C RR	80
Freight from Corry to New York	3 50
Total	$5 55

And up to 1876 pipeage and freight was about $2 per bbl. I believe it is safe to say that up to 1876 transportation from wells to seaboard was more than was received for the oil at the wells, to say nothing about the cost to barrel. The Pithole and Oleopolis and Miller farm lines were the first to pipe oil, but they were soon followed by several others. In 1876 there were about 20 different pipe lines running oil, and in competition with each other it was no uncommon thing for a producer to take a lease and sell his expected production from his lease before he had drilled his wells, and receive his money for from 1,000 to 2,000 barrels of oil. I heard of one "producer" who sold 1,000 barrels of oil to three different pipe lines from the same well, before the well was drilled, and received his money on the basis of $4 per bbl. I only refer to the above to show the kind of competition there was in piping oil. That kind of business was a bad thing for the pipe lines. The Pennsylvania Transportation line was forced to the wall through competition, and at the time of the consolidation of all the lines it was a good thing for them, but bad for the poor producer. I have as a producer been sorry many times of the consolidation of the pipe lines, as it seems so hard to have to wait to sell my oil until I had produced it and run the same into the pipe, especially after I had been accustomed to receive money for the same before my wells were drilled. I long for the good old days of yore and of competition in pipe lines. Competition in refining was about as bad for the refiner as it was for the pipe lines. I have had some experience in the refining business. When I arrived in the oil country in 1864, the refining business was a sort of "free-for-all" fight and it soon became evident that the only way they could succeed was by consolidation, and they compromised by pooling their oil and selling through one agent. This was a great success for a time but the transportation was too much for some of the noble refiners to stand and they commenced to sell outside lots and that broke up the combination and then the free for all fight commenced again. During the combination outsiders had got the fever and new refineries sprung up everywhere, and for five years the refiner had an elephant on his hands, but in 1876 the Standard Oil Company commenced to consolidate with those who would join them, and to buy out those who would not consolidate. In July, 1876, 90 per cent of all the refining was controlled by the Standard Oil Company, and refined oil immediately advanced and crude oil went up from $1 43¾ to $4 25 per bbl. and the average for the year was $2 56¼ per bbl., while in 1875 the average price was only $1 35 per bbl., while the production was 250,000 bbls more in 1876 than in 1875. The following shows the number of wells, the amount of production, the price of oil at the wells, consumption and stock on hand for the past 28 years.

Year.	Number of Wells.	Amount of Production	Average Price for year	Consumption	Stock
1859	1	2,000	$20 00		
1860	200	200,0 0	9 60		
1861	200	2,110,000	2 73		
1862	400	3,055 000	1 05		
1863	500	2,610.000	3 15		
1864	1000	2,130,000	9 87½		
1865	1000	2,721 000	6 59		
1866	900	3,732,000	3 74		
1867	900	3,583,0 0	2 41		
1868	1000	3,716.000	3 62½		
1869	1000	4,351,000	5 63¾		
1870	1044	5,371 000	3 89	5,156,528	524,626
1871	1472	5,531.000	4 34	5,553 626	522,000
1872	1201	6.357.000	3 64	5,804,577	1,084.423
1873	2361	9,931,000	1 83	9,391,226	1,625,157
1874	1350	10,883 000	1 17	8,902 513	3,705,639
1875	2885	8,800,000	1 35	8,956,439	3,550,200
1876	2360	9.015.000	2 56¼	9,742,161	2 824,730
1877	4954	13,043,'00	2 42	12,749,902	3,127,827
1878	3018	1',,67.000	1 19	13 879 538	4,815,229
879	2889	19,827.'00	87½	5 961,509	8,470 490
1880	4194	26,044,000	94¼	15 590 040	18,9 8 450
1881	3848	27,'98.000	85⅜	20,148,726	25,019.704
1882	3269	30,460,000	73⅜	21,483,093	34 596 612
1883	2886	24.800,000	1 05¾	22,0 6,612	34,800,000
1884	2409	23,'00 000	83⅛	23,5 0 000	34,800,000
1885	2857	20,900.000	68	23 10 ,000	33,800,000
1886	3525	26,150 000	71¼	26,7 0.000	33,'00,000

I commend the above to every producer and ask him to honestly say who should be censured for the present price of oil. The production for 1886 was the largest of any year except 1881 and 1882 and not including Lima—and the number of wells drilled was more than was ever drilled in any one year except 1879 and 1880; but if Lima and gas wells were included then 1886 is the banner year for bouncing the drill. Washington, Stannopin and Lima were all opened up by drilling for gas and what has the wildcatter done in opening up these pools. In May last I was at Little Washington for the first time, and upon examination I found that there had been drilled in the Washington field about 275 wells, which had cost on an average of $8,000 a well, or $2,200,000 and bonus and royalty costing at least $1,000,000 more, making an expenditure of $3,200,000, with the total production amounting to less than 3 500,000 barrels, which at 80c per barrel would amount to $2,800,000, making a loss of $4 0.000 to date, but still having their wells on hand, agreeing that most every producer interested in the Washington production is also interested in Ohio fields; when oil was discovered in the Washington field, the market price was $1 12 per barrel.

Since then there have been produced over 40,000,000 barrels of oil, and stock on hand 33,-000,000 barrels, or a total production and stock of 73,000,000 barrels, which has been sold for 40 cents per barrel less, on an average, than the market price was when the Washington pool opened, which makes a loss on production and stock of $29,200,000. Washington is not alone responsible for this terrible loss, but as it has been the largest pool and the largest wells, I have selected it to show how the noble producer will drill if he has the chance, and then he is ready to blame some one for his folly. Had the Producers' Union in 1878 attended strictly to producing instead of flanking other battles the producer would have had money enough on hand to day to purchase the Standard Oil Company. There has been produced since that time 213,790,000 barrels of oil, which has been sold for less than 90 cents per barrel, and every barrel could have been sold for $2 50 per barrel. But the producer must crush the Standard by building pipe lines to the seaboard. If the producers will organize and give the world what oil it needs and no more, they will be masters of the situation, and the world will pay our price. Our trouble has always been with producers in organizing that we must build railroads, pipe lines and refineries. Railroads, pipe lines and refineries do not consume our oil. They are only the mediums through which our oil is furnished to the consumers. There is no reason why we should not have been friends; but if refiners, pipe lines and railroads cannot agree amongst themselves, let them do their own fighting. Our business is producing oil and nothing else, as an organization. If individual producers desire to engage in refining and piping oil, I say may God speed them! but producers should organize for only one object, and that should be to control the production of oil. If we produce more than the world wants, then have the organization take the surplus off the market and have the balance sold by the organization. The producers' organization could in that way have any price they desired for oil. But the producers must gamble in what they have to sell, and then the speculator would object to having one seller. I believe it was in 1867 that the Oil City Oil Exchange was first organized, and the oil producers were the men who organized that exchange and all other exchanges in the oil regions, and to-day the New York and Pittsburg Oil Exchanges make the market price for our product.

Speculation has for the past five years done more to keep the price of oil down than the wildcat driller. They are twin brothers. The speculator that takes the short or bear side of the market and receives the carrying charges has been the successful gambler. Every new well is used to break the market. Every break in stocks, every money panic, and every disaster or catastrophe of any kind, to say nothing about the damnable lies that have been circulated to break the market—all tend to help the bear side. Some of the largest producers have been ruined by speculation, hundreds of millions of dollars have been lost by the oil region people. Had there never been an oil exchange it is safe to say that the oil regions would have been hundreds of millions of dollars better off to day. I speak from my own experience and am one of a large majority of the population of nine oil counties of the State of Pennsylvania—say nothing of outsiders—from boot blacks to ministers that have lost through speculation. There is no business that would pay better than producing oil if producers would organize and name the price that oil should be sold for, as they certainly can do if they will. But to be able to make the price we must not speculate, nor build railroads, pipe lines or refineries, as an organization.—*Quarter Centennial Derrick.*

Turkey Red Oils.

R. BENEDIKT AND F. ULZER.

All previous investigations on Turkey red oils have failed to explain two essential points. On the one hand the chemical constitution of the portion soluble in water is not clear, while on the other there is no explanation to show why castor oil is better adapted for the preparation of Turkey red oil than other oils.

In the following we wish to show—

1. That the soluble portion of Turkey red oil neither consists of fatty acid glycerin sulphuric ethers (Liechti and Suida), nor of sulphofatty acids (Mueller-Jacobs, Ssabansjero), but of a compound having a composition analogous to that of ethyl-sulphuric acid.

2. That the difference in the properties of castor turkey red oil and olive turkey red oil can be explained by the fact that the former essentially consists of unsaturated, oxidizable fatty acids, while the latter consists of saturated fatty acids. As the oxidation of the finely divided oil upon the fibre, by the oxygen of the air, undoubtedly plays an important part in turkey red dyeing, it follows that castor oil must give more satisfactory oil mordants than olive oil.

Commercial turkey red oils which are used as mordants in modern dyeing are prepared by running concentrated sulphuric acid in a thin stream into cooled castor oil, the temperature rising very little during the operation and without appreciable liberation of sulphur dioxide. After standing for some time the mass is mixed with cold water, the acid layer is drawn off, and the oil is washed several times in a solution of salt. Finally, it is wholly or partly neutralized with ammonium hydroxide.

Mueller Jacobs, Liechti and Suida, Saytfew, Ssabansjew, and others have studied the chemical processes taking place during the reaction. For this purpose, on account of the greater simplicity, they did not use castor oil, but olive oil, almond oil, or oleic acid.

From these investigations it undoubtedly appears:

1. The product of the reaction of concentrated sulphuric acid upon triolein consists of two parts, one of which is soluble in water, while the other is insoluble.

2. The portion which is soluble in water consists essentially of oxystearic acid and its anhydride, and also contains oleic acid, with unchanged triolein in some cases.

. The portion soluble in water, under favorable conditions is split up with the formation of oxystearic acid and sulphuric acid.

Regarding the nature of the water-soluble portion opinions are divided.

Liechti and Suida take it for a mixture of oxystearic and oxyoleic-glycerin-sulphuric ether.

This view has already been disproved by Mueller-Jacobs, by showing that oleic acid gives the same product as triolein. We have repeated the investigation of Mueller-Jacobs, and can confirm his results.

The formulæ of Liechti and Suida are also excluded, because they would represent neutral bodies, while the compounds in question are strongly acid. Such compound ethers would also be readily saponifyable by potassium hydroxide solution. As we will show further on, it is impossible to decompose the oil by boiling with strong potassium hydroxide solution. Finally, the determinations made by Benedikt and Szigmondy gave only small quantities of glycerin.

Mueller-Jacobs and Seabansjew take the water-soluble oil to consist of sulphe acids, the former sulpholeic, the latter sulphoxystearic acid.

We have attempted to prepare the sulpho acid of a higher fatty acid by an altogether different method, in order to ascertain whether the compounds belonging to this group exhibit a behavior similar to to that of turkey red oil. We reached the result by first preparing a sulphur derivative, which we will for the present call sulphuroleic acid, and then oxidizing it.

Preparation of sulphurfatty acid.—100 gms. of oleic acid are heated for two hours with 10 gms. of sulphur on an oil bath to 220 deg. C. The evolution of hydrogen sulphide, which is at first very strong, has then diminished, and the sulphur is completely dissolved. The mass is allowed to cool and a small quantity of a crystalline product is separated by filtration. The oil is dissolved in 3 volumes alcohol, the solution is supersaturated with ammonium hydroxide, diluted with water, and precipitated with barium chloride. The precipitate, suspended in the solution is then shaken out with ether, to dissolve the barium salt of the unchanged oleic acid. After removing the etheral layer, the precipitate is decomposed with hydrochloric acid and the solution is again shaken out with ether, which now takes up the sulphuroleic acid. On evaporating the ether, there remains a dark colored oil, which shows little tendency to solidify. We have not yet succeeded in purifying and decolorizing it.

It is not volatile without decomposition even in vacuo, but decomposes into a neutral oil containing sulphur, and a solid acid, free from sulphur. The sulphur in the crude sulphuroleic acid was found to be 10.89 per cent, while the formula $C_{18}H_{33}SO_3$ requires 10·26 per cent.

To prepare a sulphofatty acid we have used the sulphurfatty acid obtained by the method just described, as well as the product obtained by directly acting upon commercial oleic acid with sulphur, and in both cases reached the same result.

100 gms. sulphuroleic acid were dissolved in 1·5 litre potash lye, and oxidized at the ordinary temperature with three litres 5 per cent solution of potassium permanganate. After filtering off the manganese peroxide the solution was nearly neutralized with hydrochloric acid, and then acidified with acetic acid, filtered several times to remove the unoxidized fatty acid: and shaken out with ether. The aqueous, slightly acid layer, which still contains the greater part of the sulphofatty fatty acid (a small portion is taken up by the ether is mixed with solution of barium chloride, when a white, heavy precipitate of the barium salt of the sulphofatty acid is obtained. This precipitate is well washed with cold water, then ground up with water in a mortar, and finally digested in a flask with an excess of dilute sulphuric acid, first in the cold, then at a temperature of 40—50 deg. C. The precipitate is allowed to settle, the solution decanted through a filter, and the residue exhausted several times with slightly acidified water. In this way the greater portion of the sulphofatty acid is brought into solution. The liquid is mixed with a saturated solution of sodium sulphate, when the sulpho acid separates as a heavy oily layer. If this is now shaken out with ether, three sharply defined layers are obtained, the upper most of which is a dilute ethereal solution of the sulpho acid while the intermediate layer consists of sulpho acid containing some ether, both the upper layers are taken off, and distilled together in a water bath, until only a brown viscid oil remains.

The sulphofatty acid prepared in this way is not pure, and contains water, which could not be completely removed by standing over sulphuric acid, in a partial vacuum for weeks. It gives no crystallizable salts, and we have not attempted to purify it, especially as we only wished to compare it qualitatively with the soluble acids of turkey red oil.

We therefore do not yet know the formula of the sulpho acid. From its synthesis, its acid character, and ready solubility in water, we may however conclude that it is a true fatty acid. A determinantion of the iodine value, by Huebl's method, shows that it is derived from a saturated acid.

Of the salts, which are all amorphous, we prepared the barium salt by precipitating the solution acidified with acetic acid with barium chloride. The precipitate was washed with water, dried over sulphuric acid and ground.

Camparison of the Sulphofatty Acid with the Soluble Turkey Red Oil Acid.—The sulphofatty acid prepared from sulphurfatty acid, and that prepared from turkey red oil are both miscible with water in all proportions. Their aqueous solutions froth when shaken. They can be separated with salt, moderately dilute sulphuric acid and hydrochloric acid, and collect on the bottom of the vessels as heavy oils. If they are then shaken with ether three layers are formed because the acids are difficultly soluble in ether, and separate with much ether in the intermediate layer. With lead, copper, calcium and barium salts they form amorphous, mostly smeary precipitates.

With boiling concentrated solutions of caustic alkalies they also behave alike. For this comparison we have freed the soluble fatty acids, prepared according to the method of Liechti and Suida, as much as possible from oleic acid and oxyfatty acids by repeatedly dissolving in water, shaking out the insoluble fatty acids with ether and precipitating by salting out.

5 c.c. of each of the fatty acids to be compared were boiled with 100 c.c. of 20 per cent potassium hydroxide solution, with a reflux condenser. After completely cooling they were acidified with exactly equal quantities of dilute hydrochloric acid. Oily drops which sank to the bottom were separated from both solutions. On shaking with ether, it takes up a water-soluble oil (it had been salted out with potassium chloride). Neither is there produced the smallest quantity of a solid, insoluble fatty acid from the soluble olive turkey-red oleic acid. It consequently follows that neither of the two acids is attacked by boiling concentrated lye.

The statement of Liechti and Suida that the turkey red oleic acid is decomposed by boiling alkalies is probably due to the fact that they acidified the hot solution after boiling with hydrochloric acid, which would cause decomposition.

Only in one single point do the two acids show any essential difference. The sulpho fatty acid is not decomposed by boiling dilute hydrochloric acid, nor even by heating with concentrated hydrochloric acid to 150 deg. C. in a closed tube. The acid from turkey-red oil is, however, easily split up into sulphuric acid and oxystearic acid when boiled with dilute hydrochloric or sulphuric acid (e. g., 1:6).

This difference in the behavior of the two acids shows that the acid from turkey-red oil can be no true sulpho acid. But it is just from its behavior with boiling alkalies and dilute acids, that we may conclude that it belongs to the class of ether-sulphuric acids. It is well known that dilute solutions of ethylsulphuric acid, split up into alcohol and sulphuric acid on long standing and more rapidly by boiling, and this decomposition is hastened by dilute mineral acids. When however ethylsulphuric acid is boiled with concentrated lye it remains unchanged.

Liechti and Suida, who believe that the soluble fatty acids obtained from triolein and from oleic acid are different from one another, have already correctly recognized the soluble acid from oleic acid as "acid sulphuric ether of oxystearic acid," and explained its formation and decomposition.

We have assured ourselves by repeated experiments, that the soluble fatty acids from olive turkey red oil, and oleic acid turkey red oil are identical, and that especially the latter, are not decomposed by simply boiling in aqueous solution. For this experiment, the acid used must be perfectly free from ether, because the presence of ether causes the following peculiar behavior, which may give rise to deception. If the clear aqueous solution of an oxystearin sulphuric acid containing ether is heated, it immediately becomes turbid and separates oily drops, which are however redissolved as soon as the ether is completely expelled by boiling. If the boiling is then continued no further turbidity is produced.

This view of the soluble portion of turkey red oil from olive oil and oleic acid, according to which it is an oxystearin sulphuric acid, also explains the difference in the behavior of castor oil with sulphuric acid, as compared with other oils.

Castor Turkey Red Oil.—For a comparison of the turkey red oils from olive oil, cottonseed oil and castor oil, we prepared turkey red oils from the total fatty acids of these oils, for which purpose we were obliged to saponify the portion of the trigiyoerides which escaped the reaction, and to decompose the fatty sulphuric acids into oxyfatty acids and sulphuric acid. We attained this in the following manner:

Two hundred gms. concentrated sulphuric acid were dropped under constant stirring into 500 gms. of each of the oils to convert them into the corresponding turkey red oils. After twenty-four hours, they were washed first with cold water, then with a solution of salt. Each oil was then covered with double the volume of alcohol, of 50 per cent, and boiled with 250 gms. potassium hydroxide. The solution was poured into much water, then strongly acidified with sulphuric acid, and boiled for several hours, after which the fatty acids separated as a clear layer on the surface. It was observed that the decomposition of the fatty sulphuric acid from castor oil is effected most rapidly. The aqueous solution was then drawn off and the fatty acids filtered through filter paper at 50 deg. C. After cooling the fatty acids from cottonseed oil, solidify, the fatty acids from olive oil almost become solid, and the fatty acids from castor oil remain liquid, and only after standing for a long time give a considerable crystalline separation.

Thirty grams of each of these fatty acids were converted into the acetyl compounds and the acetyl value determined. In addition to this the acetyl value of the fatty acids from various commercial turkey red oils were determined, and finally the same test was made for the soluble and the insoluble portion of castor turkey red oil. As the following table shows, it was found that the acetyl value of the acids from olive oil and cottonseed oil, corresponding to the conversion of the liquid unsaturated fatty acids into oxy-fatty acids, was increased, while that for the castor oil remained very near the same:

Turkey Red Oils.	Fatty acids from the turkey red oils. Acid value.	Fatty acids from the turkey red oils. Saponifying value	Fatty acids from the turkey red oils. Acetyl value.	Fatty acids from the original oils. Acetyl value.
Olive Turkey red oil.	151·6	255·8	104·0	4·7
Cotton seed Turkey red oil.....	178·7	231·4	52·7	16·6
Castor Turkey red oil.	140·0	283·4	143·4	142·1
Castor Turkey red oil, soluble portion.....	139·2	286·4	147·2	....
Castor Turkey red oil, insoluble portion	153·5	278·5	125·0	....
Castor Turkey red oil from Javal.....	152·0	301·0	149·0	....
Castor Turkey red oil from Vienna.....	141·1	291·3	150·2	....
Calculated for oxystearic acid	164·0	328·0	164·0	....
Calculated for ricinoleic acid..	165·0	330·0	165·0	....
Calculated for dioxystearic acid.....	140·25	420·75	280·5	...

The difference in the behavior of olive oil and castor oil is explained by the different constitution of oleic acid and ricinoleic acid. The latter can combine with sulphuric acid as an oxyacid with the elimination of water, to form an ethersulphuric acid, and must then, upon decomposition, again give sulphuric acid and ricinoleic acid.

The formation of ricinoisulphuric acid is therefore analogous to the formation of ethylsulphuric acid from alcohol and sulphuric acid while oleic acid, similar to ethylene, combines with sulphuric to form oxystearin sulphuric acid. The castor turkey red oil therefore differs from the olive turkey red oil in containing the acid sulphuric ether of an unsaturated acid, while the latter contains the corresponding derivative of a saturated acid.

This is confirmed by the iodine values of the fatty acids obtained by decomposing the soluble portion of the turkey red oils. The acids from olive turkey red oil takes up no iodine. For the acids from castor turkey red oil, the iodine value was found to be 77·3, while that of ricinoleic acid is 85·2.

It is evident from this that the castor turkey red oil is still capable of much oxidation, while the olive turkey red oil is not, and that therefore the former must give a much better mordant for turkey red dyeing.

As already stated, a crystalline body separates in small quantity from the fatty acids of castor turkey red oil, after standing for some time, which, according to a preliminary analysis, must be looked upon as a dioxystearic acid, and the formation of which may be explained in a manner analogous to the formation of oxystearic acid from oleic acid. We are engaged in preparing this acid in greater quantity and studying it.—*Zetchr. f. Chem Ind.*

Buying an Oil Farm.

Dr. C. A. Cooper, of Oil City, so well known in the oil regions, was solicited for an interview for the *Quarter Centennial Derrick*, and gave these interesting reminiscences:

"During 1864, while at my home in Clone Valley, N. J., my attention was attracted to the oil regions of Pennsylvania by an illustrated article in *Harper's Magazine*, wherein was depicted the various scenes that struck the eye of the special artist during a trip down Oil Creek from Titusville to Oil City. From this dates the commencement of the troubles consequent upon my further action in the matter.

"At first I viewed it as common with other mining excitements, but the impressions made upon my mind grew stronger. I had been a country physician for 22 years. The labor entailed by my duties had the effect to break me down in health, and, like old Ponce de Leon, I began to look around for a fountain that would restore me the strength that I had lost. After all, it struck me that the oil regions might be the place I was seeking. To convince me further that Oildom would be just fitted to my case, a few kind friends, in whom there was no guile, forwarded me from their offices in Pine street, New York City, a number of oil company prospectusses. These set forth, it is needless to say, in all the glowing terms of which our language is susceptible, the advantages of the new Oil Dorado; the disadvantages I afterward found out for myself. It was a heavy strain on my common judgment to believe that these pictured statements of the rapid acquisition of wealth could be in any great degree real. So I made up my mind, after many anxious hours of thought, that I would go into the maelstrom, for so it appeared to me, with my eyes open. That is, I would see the land before I concluded to locate or invest. It struck me, too, that I should like to see some tangible evidence of this golden stream—gold was 280 then—that was reported as flowing into the coffers of the chaps who had made investments. So I packed my grip and sought out my friends in Pine street, New York. They soon filled me chuck full of information on this part of the subject, in fact they were overflowing with it.

The United Petroleum Farms Association had been formed sometime previous. All connected with it were gentlemen of high standing, being personal friends as well. The company was evidently in a good state, as the checks shown in the shape of fat dividends gave proof. And the stock of the company had gone up from 10 cents to $10 per share. Is it any wonder that a plodding mortal like myself should feel his pulse quicken and caution waver at such evidence as this?

SEEKING AN INVESTMENT.

"After counselling both with my friends and judgment, possibly more with the former than the latter, my friends informed me that the only piece of property in the market, located on Oil Creek, was the John Buchanan farm, everything else in the shape of real estate having been bought and incorporated into oil companies. Further, that a gentleman named Arnold Plummer, from Franklin, Venango county, was then in the city, and through his aid I could possibly succeed in getting possession of it. To be brief, I saw Mr. Plummer and concluded to visit the oil country with a view to investment in case it suited.

"It was now the spring of 1865. The heavy flood had wrecked the railroad leading into the oil country, and the question was how to get there. The different incidents of the journey with Mr. plummer are not material. By rail, stage and mudwagon, we finally arrived at Franklin. After a few day's sojourn with the Plummer family, during which I formed a friendship among the most pleasant of my life, which still endures, Mr. Plummer and myself started for oil city over the Atlantic & Great Western Railroad, which, as near as memory serves, had been completed to the borough limits of Oil City, the stopping place being near the Moran House, in the Third ward, a few days before. A view of Main street, which we had to traverse to reach a hotel, it being evening, was conclusive of the belief that an army corps or two with all their belongings, had passed through. The Virginia mud that I had witnessed a few months before was a Nicholson pavement compared to it. We were informed that on an average fully 500 oil-laden wagons passed over this street daily. So the depth of mud was not to be wondered at.

AN EARLY OIL CITY HOTEL.

"The Crapo House, kept by a gentleman of that name was finally reached, but to our discomfort the hotel was crowded with pilgrims like ourselves to an extent that standing room appeared to be all that was attainable. However, it fell out that Mr. Plummer and Crapo were special friends and by this lucky chance we were provided with a very small but neatly furnished bedroom with a double bed in it. By

this time it had began to rain. When in bed we could hear the rain splashing against the window with a force that sounded as if it was flowing into the room. The pattering drops lulled me to a pleasant slumber and I slept like a child tired out at play until morning's beams broke. On awakening my sight was greeted with the appearance of a respectable looking, gray-haired gentleman lying on a lounge that constituted a part of the furniture of the room. He apologized for his presence, stating that as every bed, bench, chair and billiard table in the house had been found occupied, Mr. Crapo, as a special favor, had allowed him to come into our room.

A RIDE UP THE CREEK.

"After considerable skirmishing among the livery stables we managed to secure two short-legged steeds for our journey to Rouseville, which was located on a part of the John Buchanan farm. As each of us stood fully six feet in height in our stocking feet, and were of anything but spare proportions, when equipped in our long rubber coats and mounted, only a small portion of our steeds was visible, resembling in some respects the horses ridden in play pantomimes.

"All being ready, we took the route. Our road lay for some distance along the bluffs on the west side, where the L. S. & M. S. railway is now located. The road was well filled with wagons loaded with barrels of oil. For these we had to turn out on a narrow pathway hardly wide enough for the horse to stand safely on. The water in the creek was high and running with a strong current. To me it was of unknown depth, and this did not add to my comfort.

$10,000 ON AN OIL BARREL.

"Arriving at the Clapp farm, Mr. Plummer stopped to see Major Adams, the superintendent of the same then as he is still. The gentleman was soon found and here was presented to me one of the most novel sights I had ever seen. Major Adams had just sold a thousand barrels of oil for, I think, $10 a barrel and the money, $10,000, had just been paid him. Using the greasy head of an oil barrel for a desk, he was engaged in counting it. Here was certainly a tangible evidence of the wealth I had been looking for.

$350,000 FOR THE BUCHANAN FARM

"In every direction horsemen like ourselves could be seen looking eagerly for leases or land to purchase. Hence my anxiety to reach my destination increased. On arriving we met David Buchanan, brother of the owner of the farm. The evidences of the wreck made by the flood were everywhere visible. Mr. Buchanan informed us that to this was due the decreased production of a number of wells on the farm. Yet the Clark & Banks well was producing at the rate of about 250 barrels per day. This flowing stream proved so attractive, combined with the reckless display of wealth by Major Adams, that I consented to close the purchase of the farm in fee, consisting of 150 acres, for the sum of $350,000.

"Our journey back to Franklin and from thence to New York was without special incident. Upon our arrival a company was formed, called the Buchanan Royalty Petroleum Company, capital stock $500,000. Outside of the original stock holders little or none of this stock was sold or held. In the course of four years the books showed that $760,000 worth of oil had been sold from the farm. This, Mr. Reporter, is as near as I can recollect the history of my first visit to the oil country. My history since then is well known."

Pithole Pictures.

The Frazier well, on the Thomas Holmden farm, which became the property of the United States Oil Company, of New York, was struck in January, 1865, and commenced to flow at the rate of 250 bbls. per day. This was the commencement of the development of that field. In extent and value

THE PITHOLE OIL DEVELOPMENT

stands first in the annals of petroleum history. It arose and flourished as a Tadmor of the oil wilderness for a brief time, and its fall was rapid and so complete that scarcely a vestige of its greatness is left to indicate that it ever existed. Except in extent the history of Pithole differed in no material particular from the scores of other oil towns that sprung up like mushrooms around the site where oil was struck. The operator followed the development. He is to-day as then ever ready to pull out from a territory where he gets only moderate sized wells, or has become crowded by his fellows, and seek for fields and pastures new that hold forth better promise. And so it has been from the beginning.

The "wild-catter" is the scout of the great army of oil operators. He selects a place in advance of other developments, leases all the land he can get possession of, and then drills his wells. If it is a success he re-leases a portion as a general thing, keeping such part for himself as he judges best. In case he fails to strike oil, he not unfrequently makes what is called a "mystery" of his well, that is, he closes up so far as he can, all approaches to his derrick and keeps every one from finding out the true state of affairs until he can unload his leases or put down other wells that will fairly test his territory.

The cautious ones follow in his wake, and if the "wildcatter" makes a lucky strike, they are promptly on hand to avail themselves of whatever advantage is to be gained, if a number of good-sized wells are struck, a hamlet or town follows in inverse ratio, that is in like proportion. As to nomenclature, the town builders of the oil country have a predilection to tack the apellation of "city" upon every settlement they make, and the consequence has been a strange medley of this class of designations, In travelling over any portion of the oil country it is not unusual to see a cluster of decayed frame buildings which once marked the spot where busy throngs hurried to and fro in high hope for a brief season, and then were forced to desert it with far lighter purses. In such ventures a vast amount of money has been expended, but the desire to follow the development has grown no less and past experience of losses and blighted hopes count for nothing.

AN OIL PICTURE.

But Pithole, the great and incomparable, is the theme we will endeavor to write of. No words of pen or pencil can do justice to that famed city of old. In the fall of 1865, the site was a pleasant looking clearing adorned with a substantial farm house surrounded with cultivated fields. Here the Holmdens had come at an early day, cleared out of the wilderness from year to year their fields and lived content with what the thin soil afforded them from season to season, and possibly from generation to generation.

In the spring of 1867 all this quiet picture was changed. Buildings, stores, saloons, hotels, boarding houses, offices and even a few dwellings, had been or were being erected on the site of the meadow land that only a few months before had been the abode of the meek looking kine of the farm. Streets were laid out and on each side of these rows of buildings sprang up as if by magic. So rapid was the growth that it dazzled the minds of men as the flame does the moth, and the final consequence was similar.

As in times of old "all roads led to Rome," so in the brief season of its triumph did all the roads of this section lead to Pithole. And all of these were filled with a hurrying throng of loaded wagons, of horsemen and pedestrians, heading for the promising Mecca of their hopes. This continued for months. The more permanent of the oil towns were nearly depopulated and the man whose postoffice address was Pithole, ranked very high in social distinction.

The oil operator takes no interest in towns further than as a stopping place, where needed food and lodging can be had. His attention is devoted to the drilling, working and management of his wells and oil. So, while the town grew and multiplied, well after well was drilled along the banks of Pithole creek and the adjacent territory. In the vicinity of the "United States" well, good wells were struck and these netted to the fortunate possessors great wealth. Others were not so fortunate, but the desire to obtain leases and interests increased with each success. A large number of oil companies were formed on the leases and interests then obtained, but only a few ever realized even a tithe of their working interest fund expended.

The glory of Pithole reached its culmination in 1868-69. The population was then estimated at from 12,000 to 15,000. Palatial hotels, so far as fare, accommodations and prices were concerned, churches, school houses, substantial business houses, machine shops, dwellings abounded; the sidewalks were crowded with busy people at all hours, boasting of the transient population that would compare with that of a large city, opera houses and all the appliances of a city were presented at this date. Other smaller towns were built around it, but Pithole was the point to which everything centered. The only mode of oil transportation at first was to haul it on wagons to the Miller farm and Titusville, the nearest railroad points, or to the Allegheny river, some seven miles distant.

The Pithole branch of the Allegheny River Railroad was the first to be completed to Pithole. Afterward came the Reno & Pithole Railroad. Banking houses transacted a business that went up into the millions, and their deposits were in accordance. The Pithole post office rated in the first class. The *Daily Record* noted the rapidly passing events and Titusville and Oil City began to fear that their glory had departed to add luster to the new luminary that had appeared on the banks of the Pithole.

THE GREASY DOWN GRADE.

In 1869 the bright glories of the city that was perhaps the most widely known of all the oil localities began to fade. Such transition once begun is very rapid. The production of oil became less daily, money from the well-fleeced innocents failed to come in, and it required but slight foresight to see the legible handwriting of decay sure and speedy. The depopulation of the town was as rapid as its building up. Interests were disposed of at any sacrifice. The Chase House, as famous a hostelry and as widely known as any in the country, was taken down and moved to Pleasantville, then a promising oil field. The operators sought other fields. The people engaged in business other than this scattered far and wide.

Then came the oft repeated signs of glory departed. Empty buildings, sparse population, then the usual fire or two and in the space of a few years more scarcely a vestige was left of what had once been a mart where millions had changed hands daily. Thousands were ruined in this brief season of wild speculation and the hundreds became more or less wealthy. It is difficult at this day to find any of the old landmarks. The branch railroads were torn up and all that remains of them is a streak of rust and the right of way provided this has not lapsed.

BIG MONEY IN PITHOLE.

For amount of actual cash investment made that of Pithole largely exceeded any, or, in fact, all the preceding oil fields combined. In addition to one-half royalty, bonuses from $5,000 to $10,000 were given and interests sold at $15,000 to $20,000 for a sixteenth. One enterprising operator has a record for selling, at high figure, 33-16ths in a single well. And this new kind of arithmetic was not unusual. The custom of buying and selling a lease on bonuses was not uncommon and on scores of such leases no derrick was ever erected or operations took place. The writer had a record kept of a lease of this class which was located only a short distance from the United States well and the center of production. The sum of $37,500 was paid in bonuses by the different parties through whose hands this lease passed, and the lease has never been operated on to this day.

The best and bravest of Oildom received their dearest lessons at Pithole. About all of the oil operators of that date could tell a tale of the chain of enchantment that field wound around them, never ceasing until they had a clear view of the maelstrom that swallowed up the millions of their hard earnings. They will remember, too, the seasons of revelry indulged in by that modern Babylon. The Swordmen's Club, referred to elsewhere in an interview with Hon. A. W. Smiley, was a noted social organization of that day, and numbered among its friends a host of genial spirits. Whether for public good or in sweet charity's cause, this organization always led. It is possible the members may have practiced, but they did not make a special merit of advocating the principles of more modern prohibition, But their graceful acts of charity condoned for their many sins of omission. They were certainly a lively and hospitable set, and made it pleasant at all times for those who were so fortunate as to be their guests. Though scattered far and wide, the surviving members will recall from this brief notice the memory of many pleasant hours,

Such is the brief sketch of Pithole in its day and proud boast of oildom. The traveler over its fields to-day can find food for reflection in summing up its history, and recalling its once brilliant promise. Amid the dense brush that marks the site of its once busy development, he will come across the remains of an oil tank, or the decayed timber of an oil derrick, or crumbling ruins of engine houses. Desolation reigns where was once life and bustle. But in many a home in the land the memory of the money lost in speculation at Pithole in the palmy days will not afford so pleasant a retrospect. But in the oil development history is repeated with unerring regularity and the scenes of Pithole will continue to be re-enacted.—*Quarter Centennial Derrick.*

The Fuel of the Future.

In estimating the difference between the cost of coal and the residuum of Pennsylvania petroleum, or Lima oil as it comes from the well, or the residuum of the latter for fuel for locomotives, all calculations based upon the first cost of either must mislead, simply because the cost of coal does not end when it is in the tender, nor when the ashes thrown from the fire box are hauled away. There are expenses attending the use of coal which the public know nothing about, but which are impressed upon those who have charge of the roadbed and motive power hourly, and these are so great as to render all calculations based upon the first cost of the residuum of oil and coal practically valueless. If the question was whether residuum of the finest illuminating oils, or the fuel Lima oil offers, or the refuse of Pennsylvania or Lima oil at from 20 to 40 cents per barrel of 42 gallons, and coal at 4 or 4½ cents per bushel as it comes from the mine is the cheapest, the problem would be easily solved. It would be simply a question of means employed to secure thorough combustion of the oil, or residuum, or refuse, without greater risk than attends the burning of coal, so far as the railway companies are concerned. As is well known everywhere, but especially in the west, where entire districts are devastated by fire, the risks are chiefly borne by others, a fact sufficiently impressed upon the transportation companies in the enactment of restrictive laws, beginning with compulsory use of the spark arrester.

It would be a boon to railway people if anyone would invent a spark arrester that would accomplish the purpose aimed at without entailing additional cost. As it is, the spark arrester imposes expenses unsuspected by the public, or, indeed, by the mass of those employed by the railway companies. Surprising though the statement may be, one of the first objects aimed at, in the experiments made on the Pennsylvania railroad, is for the purpose of discovering a substitute for coal that will relieve the railway people of the cinder nuisance.

To explain the situation fully, it must be understood that the quantity of cinder showered upon the track is so great as to necessitate the overhauling of the ballast every year. Anybody can satisfy himself on this point by noting the appearance of the road between this city and Philadelphia before it is overhauled in the fall, when the road is inspected. Although the Pennsylvania railroad is pronounced the model railway of the country, this enviable reputation is maintained by the most careful scrutiny and rigid enforcement of such regulations as experience suggests.

The cinder from the smoke stacks fills the interstices in the ballast, lies on top of the broken stone, and is ground into the dust that is annoying to the traveler. To keep the roadbed in good order, it is necessary to lift the upper portion, sometimes all, of the ballast, and remove the cinder accumulated. This nuisance is so great, that in order to lessen it, iron kettles holding from eighty to one hundred gallons have been placed along the track on portions of the western division, for the pupose of collecting the cinder for easy removal. Workmen gather the cinder into the kettles, which, when filled, are lifted on a flat and hauled away. To the cost of handling coal from the time it leaves the pit wagon until it is placed in the locomotive tender must be added the cost of removing ashes and cinders.

All efforts to lessen the cinder nuisance have been costly. The latest device, termed an "extension," which has been placed upon a number of engines, is simply a contrivance that arrests the mass of cinders which otherwise would be thrown out of the stack. The cost of the "extension" is so great that it is regarded by practical men as not likely to be generally introduced. It will be seen from this that, apart from the question of personal comfort, freedom of smoke, cinder and soot, the railway companies are guided by purely economical aims in efforts to find a substitute for coal.

It has been stated that the recent tests on the Pennsylvania railroad showed that one pound of oil is as valuable as two pounds of coal. It is furthermore stated that 4,511 pounds of oil were used between Altoona and Pittsburg, and 3,985 pounds on the eastern trip. The oil preferred is said to weigh on an average seven and three-tenths pounds per gallon; therefore six and one-half barrels at forty-two gallons per barrel would make one ton. In order to ascertain the relative economy of heat production the cost of six and a half barrels of oil divided by one and three-fourths gives an equivalent value of coal.

There is another and more satisfactory way of estimating the relative cost than is obtained from this statement, which does not give the price of coal or oil.

A much clearer way of putting it so that the public will understand it, is to say that it requires upon an average six wagon loads of coal for the round trip between this city and Altoona. There have been instances where seven cars have been hauled with less, but these are more than overbalanced by the instances where the amount consumed, in the opinion of those well informed, was much greater. Allowing 56 pounds to the bushel (as is usually done where the run of the mine is taken) we have 209 bushels, and putting the price at 4 cents per bushel, the cost of 6 wagons, or 18,000 pounds would be $8 36. It is entirely safe to assume that the railway company does not obtain coal for less than 4 cents. Say that 11 barrels of oil were used on the westward and 10 on the eastward trip, at the outside price, 40 cents per barrel, it would not cost more than $8 40. Add to the first cost of the coal the expenses incident, such as have been described, the balance is all in favor of fuel oil. But there is good reason to believe that much greater results will be secured from fuel oil, and these, and the development of a field of fuel oil practically unlimited puts an entirely new aspect upon the question. The market price of this oil which possesses qualities for fuel purposes greatly superior to the lighter oil employed as an illuminator, is now 20 cents per barrel, Say that as it displaces coal it will appreciate in price, it is believed that it will prove a paying business to the producer to supply it at 30 cents per barrel, and when this is done, the probability is that it will be employed on railways, steamships and wherever stationary engines are used.—*Pittsburg Times.*

Adulterated Pepper.

A New York correspondent of the Philadelphia *Press* writes: Government and newspaper investigation into the adulteration of foods cannot be complete without some information of the tricks of the pepper trade. When the highest import duties were placed upon spices, and principally on pepper, the adulteration of the latter article was so general that fifteen years ago it would have been impossible to purchase the real condiment in any grocery store. Rice flour was the principal adulterant used, but the lowest grades were freely mixed with common flour of all descriptions and even with cornmeal. When the duty was taken off spices in 1883-4, the price of pepper was much reduced, and at the same time an adulteration act was passed in several states. The duty was taken off pepper in the United Kingdom ten years before that time, and in 1874 white pepper was sold at 12 and 13 cents a pound, black being about half the price.

Low prices and a decrease in the adulteration greatly increased the consumption of pepper in Great Britain. Since 1881 the produc-

tion of pepper has been gradually decreasing, and the volcanic disturbances which took place in Java and in the Straits settlements in 1883 destroyed many pepper plantations and spread general disaster through the producing regions of the East. Since then the price of pepper has nearly doubled in consequence of the short supply and manipulation by London capitalists.

The market price of pepper is now as high as it was with the duty; therefore the adulteration business is again in a flourishing condition. To-day it is carried on with more slyness and tact than formerly, and while pepper for table use may be adulterated to the extent of 50 per cent, the spice may be sold as pure pepper. This may appear strange to the uninitiated, but it is easily explained. There are several kinds of pepper. That usually sold for table use is the one known to commerce as black pepper and white pepper, both the same article, only the white has undergone a process of bleaching. The market prices of these are fourteen to fifteen and one-half cents and twenty-three to twenty-seven cents respectively. There is another kind of pepper, known to commerce as long pepper, which is worth about twelve cents. This is not by any means so rich in pepperine—the active element of pepper; it contains only 1·70 per cent against 5·56 to 6 per cent in good Singapore black or white pepper. This long pepper is used to a considerable extent in mixing with both black and white. In some cases 50 per cent is used. This enables the seller to guarantee it as pure pepper, whereas it has hardly more than a third the actual strength of the genuine article. While this practice is almost universal in this country, there has never been a case brought before the public by those who have the adulteration of food under their care, and it is well known that even those houses which boast of selling pure spices are guilty to some extent of the trick. A recent decision has been made in great Britain which now renders all dealers liable to a fine who sell any kind of pepper which has been reduced by the addition of cheaper grades.

Another trick is to grind common ginger and mix it with pepper. This reduces the strength of the pepper considerably, and to get over this difficulty there is an addition of ground chillies, or what is commonly known as red pepper, put in. Red pepper is very strong and produces a burning sensation, and, while the commonest kind of black pepper is worth thirteen cents on the market, good chillies for grinding purposes can be bought for six to six and a half cents. The difference in price is quite an item, and a little goes a long way. If the consumer gets very strong pepper, which burns the palate, it is safe to say that it is greatly adulterated by the addition first of some cheap article devoid of pepperine and then burned up, as it were, with cheap red pepper.

Recently there has appeared another adulterant named poivrette, which is nothing else than ground olive stones. It is worth about one-half cent a pound in Italy, and can be delivered here at about double that figure. It is almost tasteless, and is similar in color to ground pepper, but perfectly useless as a spice. It has none of the redeemable features of ginger, long pepper or chillies, but is a perfect fraud on the consumer. For a long time analysts were baffled to find a simple test, but recently Dr. J. Campbell Brown, of Liverpool, has found one. The pepper is boiled until all the starch is absorbed into the water. Then more water is added to wash the solid particles, which are then strained and placed upon a white surface. If there are yellow particles then, this shows the presence of "peperate" or ground olive stones. On testing them with the teeth, they will be found to be hard and gritty, while the pepper is soft and easily crushed.

There are some dealers who still use the old adulterants, such as rice flour, wheat flour and cornmeal; but the more extensive firms use peppers of an inferior grade. It is strange that while even now adulterated pepper is quoted in the price-lists of large jobbing houses there has never been any attempt to put in force the laws against adulteration. A visit to the factories of these large jobbers would be sufficient to convict every one of them, yet it is not done. Pepper will no doubt be adulterated so long as prices keep up to their present level, unless those responsible for the administration of the laws do their duty.

The *Chemist and Druggist*, in speaking of pepper adulterations in London, says;

A distinct advance in the pepper adulteration question was made at the Lancaster Police Court on the 16th inst., when a grocer of the town named Wilson was charged with having sold pepper containing, according to the public analyst, 15 per cent of olive stones, starchy matter, and other foreign vegetable matter. The interesting point about this case was that it brought into court representatives of the grinders and of the wholesale dealers, and that these admitted the adulteration, and admitted also that the retailer was quite innocent of this adulteration. It is quite evident that this pepper adulteration business is carried on on an extensive scale, and is yielding magnificent profits to somebody. The retailers who pay the fines are not the people who are raking in the profits, so that the evidence of the wholesale representatives was of particular interest. The defendant in the Lancaster case had obtained his pepper from Messrs. Rishton, Cooper & Dunderdale, of Liverpool, and Mr. Cooper, of that firm, was in court at the trial, and, it was understood, was ready to testify that his firm had sold the pepper as they received it. But to save time this course was rendered needless by an arrangement come to that Mr. Thomas Vacher Low, managing director for Messrs. White, Palmer & Co. (Limited), who supplied the pepper to Messrs. Rishton, Cooper & Dunderdale, should explain matters. Mr. Low said his firm supplied the pepper and warranted it. But he was now willing to admit that the pepper complained of was a part of what they had supplied, and that the analyst's certificate concerning it was more or less accurate. Mr. Low then made the following important statement:—

I think we are the largest dealers in pepper in the United Kingdom, and last year, owing to a fire at a large grinder's in London, we had a most extraordinary demand for pepper, which our mills could not supply, and we were compelled to buy as the only way to meet the demand. In the same week in which I sent out the barrels of pepper which have been already mentioned, we delivered no less than thirty tons of ground pepper. This was a great demand, and we were obliged during that period to buy ground pepper, which we have never done before, and shall never do again. We got it through brokers, and it was guaranteed as genuine. We took every precaution to have it tested, and we sent samples to Somerset House, and it was declared to be pure. We have since found that the pepper was adulterated, and I am glad of an opportunity to make this statement publicly and before the world, so as to clear my position. We never adulturated any pepper ourselves, and we should never have thought of buying pepper had it not been that we were unable to supply the demand.

Mr. Low subsequently made the following further explanation:

We are a public company in a very large way of business. At least three-fourths of our business is in pepper. There have been statements going about that the persons who make this adulteration must realize enormous profits, but we certainly do not make the profits. I have our printed and audited balance sheet in my pocket. We paid no dividend last year, we carried forward a debit balance, and our gross profit on the pepper turnover was less than one per cent, so that we do not make any undue profit.

Mr. Low therefore knows where the adulterated pepper comes from, and could no doubt give some material assistance to a public official, who should be authorized to search for it. Is there nobody whose rightful business this becomes? It would surely be a better mode of procedure than to multiply indefinitely the prosecutions of practically innocent retailers.

Orange Azo Dyes.

(Continued.)

MANUFACTURE OF ORANGE. II.

For the manufacture of orange, II, three sets of apparatus are required; the first for the purification of the sulphanilic acid and its conversion into diazobenzenesulpho acid; the second for preparing, and if necessary purifying, the naphthol solution, and the third for preparing the moist coloring matter.

The first set consists of a cast iron boiler provided with a wide manhole and having a capacity of 800 litres. It is connected with an elevated 6 chamber filter press, which retains any residue remaining in the sulphanil solution. The filtrate is run into a wooden tank, set upon scales and holding 800 litres. The solution after being weighed is transferred to the diazotizing tank. The so-called diazo tank is provided with a stirrer, and holds 2,000 litres. All parts of the tank which may come in contact with the acid diazotizing solution, are made of wood. Over the tank is placed a small nitrite tub holding 250 litres.

The second set consists of a cast iron kettle which is connected with an elevated 6 chamber filter press. This kettle, which holds 800 litres, is used for the preparation of the alkaline naphthol solution, which after passing through the filter is run into the color tank.

The third set is used for mixing the naphthol solution with the diazo benzol sulpho acid; the tank employed for the purpose holds 4,000 litres. A rapidly revolving stirrer effects an intimate mixture of the materials. The color tank is connected with an 18-chamber filter press.

The solution used in the preparation of the coloring matter, which must be made by the aid of heat, is prepared the day before being diazotized, to economize the use of ice as much as possible. The sulphanilic acid is also separated by means of sulphuric acid on the previous day, because when separated by the aid of heat, it is obtained in a very finely divided state, in which form it is best adapted for diazotizing.

In the first place a solution of 26 kilo sodium hydroxide is dissolved in 400 litres hot water in the cast iron kettle. To the boiling soda solution is added 100 kilo sulphanilic acid in 20 minutes. As soon as all su phanilic acid is dissolved, and the solution shows a faint alkaline reaction, it is boiled another 20 minutes, with the introduction of steam, to expel any aniline which it may still contain. After this is accomplished—best determined by the odor of the escaping steam—the steam is turned off, and the solution is filtered through the filter press, the filtering surfaces having been covered with a double layer of cotton cloth. The filtrate is immediately weighed and analyzed, an operation requiring about 5 minutes.

Assuming the weight to be 560 kilos, the specific gravity 1·095, and that 10 c.c. of the solution require 11·15 c.c. normal sodium nitrite solution.

The calculation will then show that the solution contains 93·7 kilos sulphanilic acid, which will require 41·3 kilos sodium nitrite of 95 per cent strength for diazotizing, and 82·1 kilo betanaphthol for pairing. The sulphuric acid, corresponding to exactly 100 kilos pure sulphanilic acid, and the soda required for neutralization is taken the same in all cases. In each case—whatever may be the percentage of sulphanilic acid—64 kilos sulphuric acid are used for precipitation, and 30 kilos sodium hydroxide for dissolving the naphthol resulting from the calculation.

After the strength of the solution has been determined and the necessary quantities of nitrite and naphthol calculated, the hot sulphanilate solution is syphoned off into the diazotizing tank and immediately precipitated with 64 kilos concentrated sulphuric acid.* The nitrite solution for diazotizing is prepared by dissolving 41·3 kilos sodium nitrite in 200 liters water.

On the same day the naphthol solution is prepared by dissolving 82·1 kilos betanaphthol in a hot solution of 30 kilos sodium hydroxide in 400 liter water. This solution, which cools over night, is forced through the filter press in to the color tank on the following day.

Diazotizing—To the sulphanilic acid precipitate, which was prepared on the previous day, ice is added until the temperature of the solution is reduced to about 4 deg. C. The stirrer in the tank is then set in motion, and the nitrite solution is run in during 10-15 minutes, in such a manner, that the temperature does not rise above 10 deg. C. If necessary more ice is added. Toward the end of the operation the solution is tested with potassium iodide starch paper, and the adding of the nitrite is discontinued, as soon as the paper is colored blue. After 5 minutes stirring, the product of the reaction, should still faintly show, the nitrite reaction.

Pairing—Into the naphthol solution, cooled by ice to 4 deg. C., the diazobenzenesulpho acid, is added within 40 minutes, care being taken that the temperature in the color tank does not rise above 12 deg. C; After the reaction is completed, the solution is tested, to be certain that it is alkaline. The stirring is then continued for 1 hour, to insure the complete seperation of the orange.

The crystalline mass, which consists of gold colored needles, having a silky lustre, are run into the pressure tank and filterep through the filter press by means of air pressure. The mother liquor runs from the latter, as a light yellow liquid, from which it does not pay to seperate the coloring matter. The presses are emptied as soon as dry air escapes, that is, when it no longer carries a drop of mother liquor with it. This can best be determined qy feeling the air with the hand. In this manner the whole of the liquid is filtered. The golden yellow color-cakes from the filter presses, which are collected in lead lined wooden boxes, are spread on sheets of zinc, broken up with a wooden spatula, and finally dried for 4-5 days at a temperature of 60-70 deg. C. The dried orange is then ground in a mill. The orange yield is 200 kilos.

MANUFACTURE OF ORANGE I.

The apparatus used in the manufacture of orange I are the same as those used for orange II. The same may be said of the materials, with the exception that alpha naphthol is used instead of beta naphthol.

Preparation of the Diazo Compound.—The sodium sulphanilate solution, like in the case of orange II, is prepared by dissolving 100 kilos sulphanilic acid and 26 kilos sodium hydroxide, in 400 liters water and boiling for 20 minutes. The solution is forced through the filter press, weighed and analyzed. It is then transferred to the diazotizing tank.

The calculation based upon the analysis gives the amount of nitrite and alpha naphthol required. The proportions of sulphuric acid and sodium hydroxide remain the same for all cases; for 64 kilos sulphuric acid of 66 deg. B., 26 kilos sodium hydroxide are always used for dissolving the sulphanilic acid, and 30 kilos sodium hydroxide for dissolving the alpha naphthol.

Example.—The weight of the filtrate is 680 kilos, the specific gravity 1·090; 10 cc. sulphanilate solution require 10·35 cc. normal sodium nitrite solution. From this is found 95·3 kilos sulphanilic acid, which require 39·9 of 95 per cent sodium nitrite and 79·3 kilos alpha naphthol.

The sulphanilate solution mixed with 64 kilos sulphuric acid, is diazotized on the following day with a solution of 39·9 kilos sodium nitrite in 200 kilos water, exactly as in the case of orange II.

The naphthol solution is prepared by dissolving 79,3 kilos alpha naphthol in a solution of 30 kilos sodium hydroxide in 400 litres water. The pairing of the alpha naphthol solution with the diazobenzene parasulpho acid is accomplished in the manner described under Orange II. The final treatment of the brownish red paste of Orange I, is also the same. The final product is a reddish brown powder. The yield is about 170 kilos.

*An equivalent quantity of hydrochloric acid may also be used.

Treatment of the Mother Liquors: The mother liquor running from the filter presses, which are still highly colored are run into a large tank and precipitated hot with dry salt. After the cooling the coloring matter is obtained by filtration. It is purified by dissolving the product from ten operations in 2,000 litres water, and reprecipitating the coloring matter from the hot filtrate by salt. The coloring matter thus obtained, no longer dyes a pure orange shade, but a brown. It is commercially known as Acid Brown or Brun acide R.

MANUFACTURE OF ORANGE R. R.

The preparation of orange from xylidine requires the following operations: Preparation of sodium xylidinesulphonate from metaxylidine; the diazotizing of the xylidinesulpho acid. the pairing of the diazoxylenesulphoacid with an alkaline solution of betanaphthol, and finally the treatment of the coloring matter.

The following apparatus is required for preparing the xylidine sulpho acid:

A cast iron, jacketed boiler, connected with steam and water, for heating and cooling. The stirrer in the boiler makes 20 revolutions per minute. The cover is provided with a manhole, connection with the air compressor, and an opening for inserting the syphoon tube, through which the contents are transferred to the lime tank.

1 lime tank with stirrer holding 3,000 litres,
2 montejus holding 2,000 litres each,
1 18-chamber filter press,
1 12-chamber filter press,
1 large cast iron tank with copper steam coil holding 4,000 litres,
1 small iron tank holding 1,800 litres,
1 scales with weighing tank holding 800 litres.

Preparation of the Sulpho Acid: 175 kilos 20 per cent fuming sulphuric acid are placed into the jacketed boiler. To the strong sulphuric acid is gradually added, with constant stirring, 50 kilos metaxylidine, care being taken that the temperature does not rise above 50 degrees C. The xylidine sulphate thus produced is heated with the excess of sulphuric acid for 4 hours to 105-110 degrees C. The end of the reaction is indicated by the complete solution of a small test in alkaline water, and the absence of the xylidine odor.

As soon as the test shows the end of the reaction, the mass is cooled somewhat, and forced into the lime tank, containing 64 kilos of sulphate in 1,000 litres water. To separate the sulphuric acid, milk of lime, prepared from 120 kilos lime, is added until the reaction is slightly alkaline. The mass is heated to boiling with direct steam. To separate the calcium sulphate in a crystalline state, 500 liters cold water are added, which will bring the temperature to about 60 65 deg. C. The white mass is run into the montejus and filtered through a filter press. The filtrate which essentially consists of sodium xylidinesulphonate, with but little lime salt, is run into a large iron tank. The press residues are returned to the lime tank, boiled with 1,000 liters water, and again filtered.

The combined filtrates are evaporated by indirect steam to a volume of about 600 liters and run into a small tank, in which it is mixed with sufficient sodium carbonate to precipitate out the rest of the lime; 5 kilos are generally sufficient. The solution is filtered through a filter press and weighed.

After determining the weight, the specific gravity of the solution is taken, and it is analyzed. If, e. g., the contents weigh 590 kilos, the specific gravity is 1·08, and 10 c.c. require 7·25 c.c. normal nitrite solution, then the yield of xylidinesulpho acid will be 79·4 kilos. These will require 28·6 kilos nitrite for diazotizing, and 56·8 kilos betanaphthol for pairing.

Preparation of the Coloring Matter.—Forty-eight kilos of concentrated sulphuric acid are required for precipitating the xylidinesulphonate solution, and 22·5 kilos of sodium hydroxide in 400 liters water, for dissolving 56·8 kilos naphthol. The xylidinesulphoacid is separated and the naphthol solution prepared on the previous day. The nitrite is dissolved in 200 litres water. The diazotizing and preparation of the coloring matter is the same as described under orange II. The treatment of the coloring matter is, however, different, because the gelatinous precipitate as it is obtained can not be filtered. The whole mass is therefore boiled to dissolve the coloring matter and precipitated with a concentrated salt solution. The coloring matter then separates in a form which is easily filtered. The press cakes are spread out on zinc trays and dried in a drying chamber. The yield is about 150 kilos orange RR.

Orange R.—The sulphonation of toluidine is effected in the manner described for aniline. 53·5 kilos toluidine are dissolved in 49 kilos sulphuric acid of 66 deg. B. and heated in a muffle for 5 to 6 hours to a temperature of 210 to 220 deg. C. The preparation of the coloring matter from toluidine sulpho acid and betanaphthol is the same as described for orange RR. and orange II.

Other coloring matters which belong here and were manufactured for some time and are still prepared for special purposes are metanyl orange I. and metanyl orange II; the former represents the combination of diazobenzene-metasulpho acid with alpha-naphthol, and the latter with beta-naphthol. The manufacture of these coloring matters is the same as that of those above described.—*Dingl Jour.*

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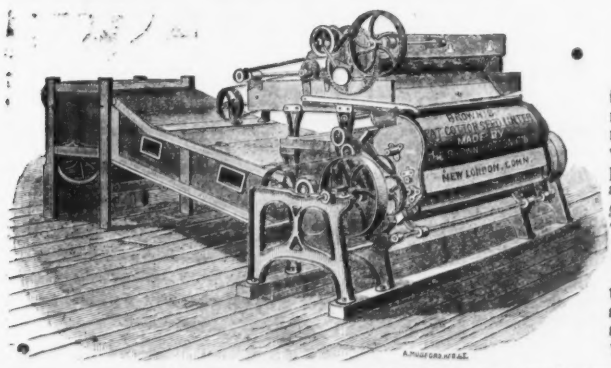

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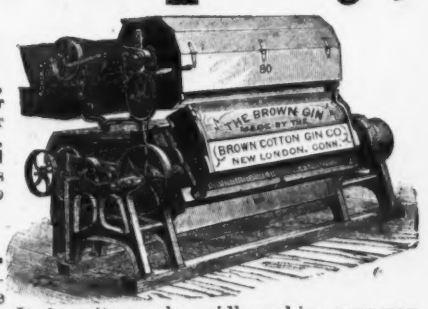

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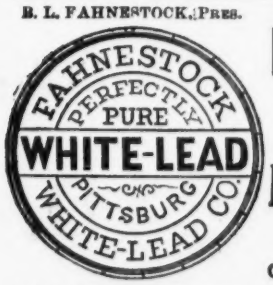

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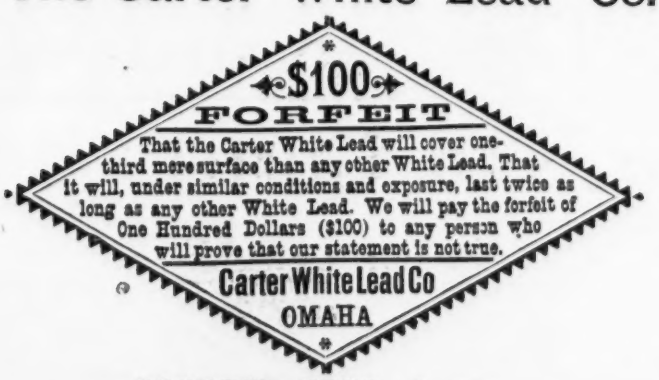
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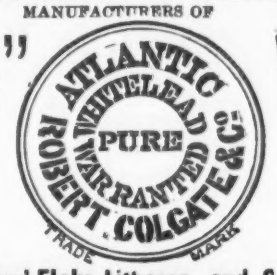

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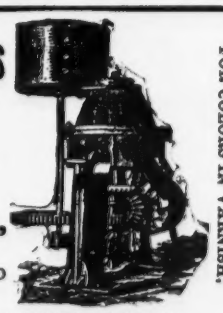

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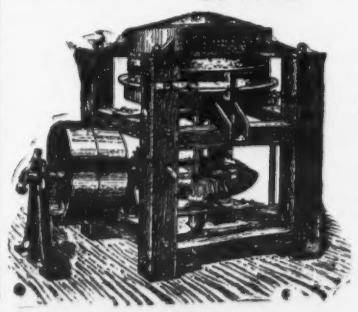

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PAINT MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 49.

TUESDAY EVENING July 12, 1887.

White Lead, Zinc Etc.

Pig lead still favors the buyers. The pressure to sell, referred to in our last combined with the indifference of buyers has resulted in lower prices. Since we last wrote there have been sales of about 500 tons July at from 4 20c down to $4 40c, the market closing with July-August deliverized offering at the lower figure. "The stock in the hands of (New York) operators continues to exist," say Messrs. Everett & Post, "and gossip says, will be held for a fall campaign, and the institution of another boom." Regarding the condition of the Chicago market on the 9th inst., our correspondents say: "We are now entering a period of summer dullness, and trade in consequence is confined to car lots, spot delivery. Consumers are confident that lower prices will rule, but at this writing we can see no indication of anxiety on the part of our several refiners to sell except in a small way. Values are nominally 4 40c, with really no business to test them." Messrs. John Wahl & Co. write from St. Louis on the 9th inst: "Declining values at the seaboard, together with the anxiety to unload in that market, caused transactions here to be very light. Prices show a decline of about 7½c from closing quotations of last week. Early in the week some sales of a retail character were consumated at 4 35c, but later rumors say; some few small lots have been sold as low as 4 27½ and 4 30c. From all appearances the market is entirely in the hands of consumers; speculators have relinguished their hold on same, and should not be surprised to see a farther drop if the present lull contines, although offerings in the west can only be considered moderate."

White lead is not so active. Corroders are engaged in fluishing up contracts, but report very few fresh orders. However as trade has kept up wonderfully well, they are quite satisfied with the present condition of affairs and are content to wait until the fall when they expect a renewal of the recent activity. Prices show no change, the general quotation being 6¼c less 2½ per cent for cash, with an extra discount of 4 per cent allowed in some instances to the larger buyers. Dry lead continues very scarce and it is doubtful if anything, of city make at least, could be picked up at less than the price demanded for lead in oil.

American Oxide of Zinc—A moderate jobbing trade has been doing in this article, but the market shows no change from last week. The following continue to be the quotations: Domestic at 4@4½c as to quality. French zincs at 6½c for dry Antwerp red seal in bbls of 220½ lbs, and 7½c for dry Paris green seal. Discounts on French are as follows: To buyers of 10-bbl lots of one or assorted grades 1 per cent, 25 bbls 2 per cent, and 50 bbls 4 per cent. No discount is allowed on less than 10-bbl lots, and discounts include brokerage.

Dry Colors.

REDS.

English Venetian—The Rialto, which arrived, had supplies of 1,000 casks of this article. The business doing during the past week has only been moderate and the market generally has been quiet, the accustomed summer dullness prevailing. Prices continue the same, and we still quote $1 45@1 50 for special brands in round lots and $1 45@1 50 for smaller parcels, according to make and quantity.

Domestics have only been in moderate request, but sales have equalled those of the foreign makes, in proportion. The demand existing has been a moderate jobbing one at the following figures: 90c@$1 05, as to place of delivery and quantity.

Quicksilver Vermilion—Advices are to the effect that quicksilver has advanced 5s 6d, but as yet no change has been made in the price of vermilion. There has been a light demand for small jobbing parcels to supply actual wants. The market is slightly firmer at the following unchanged quotations, 48½@50c for round lots, 49½@51c in bags, and 51@52c for smaller parcels.

Cobalt oxide—The outside market continues quiet and the demand light. The deliveries on contracts have only been fair. There is nothing of interest to note. Prices continue at our former quotations of $2 20@2 25 for best English and German and $1 85@2 00 for German and No. 2.

Red Lead and Litharge—The market is practically in the same condition as reported last week. A moderate business has been done at our former quotations as follows: For red lead 5¾@6c, and for litharge 5½@5¾c.

Carmine—There is nothing of interest to report in the market for this article. Stocks have been in light request, and apparently no interest has been taken in the business at hand. No change in prices can be noted, the general market quoting as follows: $2 85 for round lots and $3@3 25 for smaller parcels according to quantity and style of packing. We continue to receive the quotation of $3 50 per lb in round lots from one dealer.

BLUES.

Blue pigments in sympathy with the general market, have been in light request during the past week. Only a "pick up" business has been done, but taking into consideration the season of the year, this has been on the whole up to expectations. Prices continue at our former quotations, as follows: 20@30c for Russian, according to grade, make and quantity, with the market steady at these figures. Chinese is jobbing at 48@50c, as to quantity and holder.

GREENS.

The association met on Monday, but transacted only routine business. Stocks are scarce, but the demand has been somewhat lighter, though a very fair trade has been done. All sales have been made at the following terms, in accordance with the rules of the association. We quote 18c per lb in bulk at which price it will be charged the buyer without regard to quantity subject to the following rebates: 1,000 to 2,000 lbs, ½c per lb; 500 to 1,000 lbs, 1c per lb; 2,000 to 4,000 lbs 1½c per lb; 4,000 to 10,000 lbs, 2c per lb; 10,000 lbs and over 2½c per lb. Additional charge for small packages, being the same as last year. On all sales made by jobbers from points west of the Alleghanies and New York State not less than ½c per lb must be added, viz. 18½c in bulk. Discount at 6 per cent. per annum for unexpired terms. No brokerage or commissions allowed to buyers.

YELLOWS.

There have been no new developments in the market for yellows. Sales of small parcels have been made, but this has constituted the business. Washed continues in good demand and there have been sales of over 50 casks at our former figures. Domestics have been fairly active and the demand has been reasonably satisfactory. Sales of 400 bbls are noted at prices within the range of our previous quotations.

Miscellaneous.

Sulphate Barytes—There have been no arrivals since our last report. The trade at hand is light and the market quiet, and it has seemingly not recovered from the dullness which usually prevails around the 4th of July. Prices are unchanged and the following are the ruling quotations: Special brands are quoted at $21 50 while others may be purchased for less. No. 2 is quoted at $13 50@16. Domestics have been in moderate request and prices remain unchanged at our previous quotations.

China Clay—Special grades only are in demand and on these the market is scarce. The other grades continue in light request, the market being very quiet, and full stocks are on hand. The market continues to have an easy tendency. The nominal quotations are unchanged as follow: $13@18 as to brand, grade and quantity. The demand for Southern has been lighter than for some time past. There is, however, no surplus stock on hand. Our former quotation of $11 50 continues to rule.

Chalk—There are no vessels offering. There is, however, only a light demand existing and a good supply on hand. The quotations to-day are $2 90@3. Advices from abroad report that there are no vessels fixed for New York. It is

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Red Lead, Litharge & Orange Mineral,
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reported that the current freight rate is now 8s 6d, being an advance of 6d.

Talc—The market for this article continues quiet, with little or no business doing. Quotations are merely nominel, and are as follows: French or Italian 1¼@1⅜c, and for extra superfine American 1⅜c is asked, while other grades may be bought for 1@1¼c according to quality. An inferior grade may be bought for ⅝@⅞c.

Terra Alba—The market at the moment is entirely bare of stocks of French. Prices are merely nominal, there being no stock to sell from. No arrivals are expected until the end of the month. There is a fair demand existing There have been sales of 50 casks to arrive at 75c The following are the nominal quotations, the same being identical with last week: 75c per 100 lbs ex vessel and 80@85c ex store for ordinary lots.

Domestics have continued in moderate demand at the following unchanged figures: No. 1 American 65@68c per 100 lbs, and No. 2 American 45@50c per 100 lbs.

Whiting—There is a good demand existing for this article and the market is scarce of supplies. There is none offering to-day below 45c. For gilders the quotations are 55@60c, but the former figure is considered low.

GLUES.

There has been a fair average demand, considering the season, for glue, which, however, is very light at this season of the year. Prices are firmly held and we are unable to note any change in same.

Glass.

WINDOW GLASS

For the time of year trade in window glass is very good, though the past few days have witnessed a natural falling off in the demand. The feeling however is steady and no changes have occurred since our last the discounts on French being 75@75 and 10 per cent and on American 75@75 and 5 per cent on single and 75 and 10 per cent on double. The American Window Glass Association holds its annual meeting to-morrow at Cape May, N. J. The gathering it is expected will be largely attended as very important matters will be brought up for consideration, notably the question of wages.

PLATE GLASS.

Buyers seem to be satisfied with the advance made recently by the dealers and importers, but as their wants are about supplied for the present they are not taking much stock and the market has a rather quiet appearance. The discounts on both American and imported is 50 and 10 per cent.

RECENT PATENTS.

365,789 FURNACE FOR BURNING HYDRO-CARBON FUEL. Filed Oct. 11, 1886. Serial No. 215,862. Issued July 5, 1887.

365,790. FURNACE FOR BURNING HYDRO-CARBON FUEL. Filed Nov. 1, 1886. Serial 217,670. Issued July 5, 1887.

365,863. FLAXSEED AND GRAIN SEPARATOR. Filed Sept. 1, 1886. Serial No. 212,395. Issued July 5, 1887.

365,921, PROCESS OF REFINING AND CLARIFYING CRUDE COTTON-SEED OIL. Filed Apr. 27, 1887. Serial No. 236,348. Issued July 5. 1887.

366,026, APPARATUS FOR MANUFACTURE OF SALT, Filed Mar, 16, 1887. Serial No. 231,198. Issued July 5, 1887.

366,035. INLET FOR NATURAL GAS. Filed Jan. 29, 1887. Serial No. 225,900. Issued July 5, 1887.

366,036. PROCESS OF MAKING POTASSIUM BICHROMATE. Filed Dec. 2, 1885. Serial No. 184,464. Issued July 5, 1887.

366,037. MACHINE FOR COATING PAPER WITH SAND, EMERY, &c. Filed Feb. 17, 1887. Serial No. 228,001. Issued July 5, 1887.

366,078. MANUFACTURE OF DYESTUFFS OR COLORING MATTERS. Filed Aug. 21, 1885. Serial No. 175,102. Issued July 5, 1887.

366,081. OBTAINING HYDROGEN FROM WATER GAS. Filed July 2, 1883. Serial No. 99,830. Issued July 5, 1887.

366,093. ANTI-NEURALGIC ELIXIR. Filed Nov. 9, 1886. Serial No. 218,407. Issued July 5, 1887.

366,125. DEVICE FOR OPERATING THE PUMPS OF A GROUP OF OIL WELLS Filed June 14, 1886. Serial No. 205,066. Filed July 5, 1887.

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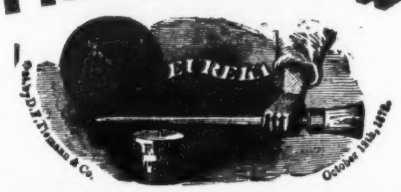

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Dry, tins 6 lbs., boxes 25 lbs., kegs 125 lbs

Soluble Laundry Blue,

Tins 1 lb. to 25 lbs. Kegs 25 lbs. to 170 lbs.

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Bags 30 and 50 lbs., kegs 100 lbs.

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Until the railroads made their advent in 1866 the only mode of transportation of the oil from the wells located in the valley of Oil Creek, which up to that time was the principal productive field, to Oil City, from whence it was shipped to Pittsburg by the Allegheny river, was by means of the ordinary flat-bottomed boat then in general use. To do this at general seasons it was necessary to create an artificial rise of water of sufficient depth, about three feet in the shallowest places, from the wells located at nearly the head of the stream, to Oil City. These were called "pond freshets."

It was simply an adoption of the plan long practiced by lumbermen to float their logs to their mills by utilizing the water of the small streams. From the pond thus formed at the mills, by co-operation of the mill owners there were collected and held by dams at one place when all the water was given at stated occasions for the purpose of floating their lumber to larger streams, and thence to market.

The oil operators of 1862 3 were prompt to avail themselves of this advantage and soon had it in good running shape and Mr. A. S. Dobbs, a gentleman of experience, was appointed superintendent. The plan of operations were as briefly described:

Upon the headwaters of Oil Creek and its principal tributaries were located a number of sawmills. Arrangements were made for these bythe superintendent for the use of the water at stated times upon such terms as he could for a season. Then this water was collected and a sluice-way made of planks was arranged at each dam in such a manner that it could be cut loose and the water let loose. This was again collected at the main dam, located on Oil Creek, a few miles from Titusville. At the time appointed the water from the main dam was let flow into Oil Creek, and upon the rise made by this the boats, which had been loaded at the wells, floated down to Oil City. From here the oil was generally transferred to a larger class of boats and, when the stage of water permitted, took the river route to Pittsburgh and a market.

The capacity of the boats in use ranged from the "Guiper," a scow-shaped craft, holding from 30 to 50 bbls, to the French Creekers and metal boat bottoms, holding from 1,000 to 1,200 bbls. These boats were arranged in such manner that they could transport the oil from the wells either in barrels or bulk. The oil was frequently run directly from the tanks at wells by means of pipe or hose into the boat. On arriving at Oil City, it was transferred to the bulk boats proper, which were arranged in compartments, with a covered deck. The first party to adopt the regular bulk boat desired to secure a patent for it, and in such case the royalty would have discounted any of the monopolies of the present day. But some operator, who, amid the race that was being made for wealth, had not entirely forgotten his Sabbath-school lessons, happened to remember Noah's Ark. Scriptural evidence was produced and a few sanguine individuals offered to produce the ark, if necessary, to defend the case against the would-be monopolist. That ended it. There was no patent applied for, or at least obtained.

The number of these oil boats employed on the river and creek numbered in the shipping season, as near as can be recollected, fully two thousand. The boats were towed from Oil City to the wells by horses. The freight rate from the most distant wells, a distance of almost 10 miles, averaged about a dollar per bbl. The freight rate from Oil City to Pittsburg by the same mode was as low as 25 cents and high as $3 per bbl.

The Oil Creek tow horse was not an inviting spectacle, so to speak, resembling somewhat the truck peddler's horse of the large cities. In a very short time the oil floating in the waters of the creek took the hair off his legs, and frequently created painful sores. But for him no plea of physical inability availed. He was worked until he dropped dead, and as a single trip realized more than enough to purchase another, the loss was scarcely felt. A story is told of one of the boatmen who started in the morning for the wells to bring down to Oil City a load of oil, who, when he returned in the evening, found that he had been drafted into the army, which was then struggling against the hosts of the rebellion. Before he slept that night he had procured a substitute, paying him $1,000, the earnings of that day, and started in again at his labors the next morning.

The boats engaged on these pond freshets numbered several hundred, and the amount of oil transported by this means for a single occasion varied from 20,000 to as high as 40,000 barrels. The perils of this class of transportation were not a few. Oil creek is a narrow and notably crooked stream. In it were a number of islands and other obstacles. Among these was the pier of the Oil creek bridge, which caused many a serious disaster, so far as loss of oil and boats was concerned. Yet the writer remembers no loss of life. Such disasters were generally occasioned by the blockaded boats starting too soon and running ahead of the rise of waters. These early birds would run aground on a shallow place and were soon battered to pieces by the rushing crowds of boats following. This not unfrequently caused a general jam and wreck, the boats being crushed by colliding, and their greasy cargoes disappeared unceremoniously into the rushing floods. Then again some unfortunate pilot would run his boat broadside upon the piers of the creek bridge at Oil City, saddlebag fashion, and others following would complement it by running up bow over. This would soon cause a jam of boats from that point to the bridge now over the creek at the head of Seneca street. On such occasions the scene was a thrilling one. The creek for its entire width was filled with boats of all classes, rushing along the swift stream, the larger crushing the smaller, the cries of the boatmen, the splintered oar blades flying in the air, huge boats, laden with oil in bulk, emptying it into the stream, the thick, green and valuable substance floating along the surface, and ruin general made a picture that once seen was never forgotten. There was no insurance against these perils. But such losses made scarcely a ripple in the busy times that then prevailed.

In November, 1863, Mr. Dobbs, the superintendent, gives the prices paid each of the mill owners for each pond freshet, amounting to about $400, and explaining the reasons why the tax upon shippers had been raised from two to four cents per bbl., the mill owners having doubled the rates they had taken the previous years.

In connection with the oil boat was the steamer fleet of tow and passenger boats. This numbered, as near as can be remembered, about 20. Among them were several first-class passenger steamers, the "Echo," Captain Zeke Gordon; the "Allegheny Belle," Captain John Hanna; "Leclaire," Captain Kelly; "Ida Rees," Captain Rees; "Wodda," Captain Soimt, and others whose names passed from memory, were notable packets.

The subject is one that could be more extensively treated of, but this is probably enough to give the readers of the "Jubilee" *Derrick* an idea of the manner in which oil was transported in the first days of the petroleum development. The pipe-line and railway have relegated the "pond freshet" to the rear with the stage coach and canal boat. In a few short years, in fact, already these scenes are only remembered by those whose polls are growing frosty, and to them this scattering sketch will recall many pleasant memories—*Derrick Quarter Centenial*.

The Petroleum Fields of Burmah.

A Rangoon correspondent of the London *Times* sends that journal an interesting account of the petroleum fields of Burmah, and which it summarizes as follows:—

There are at present two principal centers of the petroleum supply in Burmah. One is at Akyab, on the Arakan coast of the old British Province. The other is at Yenangyoung, on the Irrawaddy, in the newly acquired Province of Upper Burmah. The Akyab petroleum fields have been worked for some years by two English companies on the American or scientific system. In Upper Burmah, at Yenangyoung and elsewhere, the old method has not yet gone out of use. The difference is seen in the quality of the oil which the two methods yield respectively. The oil at Akyab is light and limpid. The other is the almost solid substance known as Rangoon oil. This latter is the kind of oil which was obtained at Baku while the wells were in the hands of the Tartars, and were worked as the Yenangyoung wells have been and still are. But when the American method was introduced at Baku the quality of the oil became at once very different from what it had been before. It is not improbable that at Yenangyoung like causes may produce like effects, and that a change in the quality of the oil may follow from improved methods of working, as it has followed at Baku. But can the Yenangyoung oil fields be worked at a profit? They give no certain promise of being so productive as the Baku fields, and these have made a poor return for the capital and labor expended upon them.

The Arakan fields in British Burmah have had the advantage of English capital and science, but they have yielded no profit. The production has been too costly, and prices have been too low. In the eastern world, as in Europe, American oil has had almost a monopoly, and has kept possession of the market. The chance that the Yenangyoung fields may prove able to compete successfully is twofold. Their oil differs in some important particulars from the American field. It has, indeed, less

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illuminating power, but it does not give off its explosive vapor at so low a temperature. In tropical countries, where the "flashing point" of common American oil is often reached, there is safety in the use of a less explosive compound, and very grave danger from the cheap oil which can be burnt with impunity in England. But the advantage of Yenangyoung thus far is shared in by Akran and by Baku, both of which produce oil safer than the American. The great hope for Yenangyoung and for the Upper Burmah petroleum fields is that their resources, when properly tested, may prove to be so vast as to put them upon something like an equality with their formidable foreign rivals. There are indications that this may be the case. The oil raised from the Yenangyoung wells has a much higher temperature than that of the air. There is an observed difference of ten degrees between the two temperatures. This seems to show that the warm oil comes from a very considerable depth below the surface. It may be 600 feet; it may possibly be as much as 2,870 feet. Or, again, the heat of the oil may be due to some one of the various other causes which our correspondent suggests, no one of which shows anything of the depth from which the oil comes.

The geological formation of the Yenanyoung oil field is at least partially known. There is some clay on the surface, and below this come tertiary sandstone and some shale. The oil is found in the sandstone. Below the sandstone there seems to be shale, and it appears, further, that the shale is saturated with oil. But we are now on conjectural ground. Our correspondent seems to incline to a belief in a vast and practically inexhaustible reservoir, and he looks with interest for the new owners of the fields to begin their operations and to discover what the facts are.

"The disturbed state of the country is the chief obstacle in the way at present. In the near neighborhood of dacoits neither petroleum works nor any other industry can be carried on with much success. When upper Burmah has been really subjugated and pacified, the new proprietors of the petroleum fields will enter systematically on their business. Fuel is very expensive on the Irrawaddy. There is no promise of a supply from the coal fields in the country, for the mines are reported as difficult to work and their yield as of poor quality. If petroleum can be drawn in abundance from fields close to the Irrawaddy it may compete very favorably with the inferior native coal and with the distant supplies from other quarters.

Petroleum a Rival of Coal Gas.

At a recent meeting of Scotish gas managers Mr. A. Macpherson referred to petroleum as a rival of coal gas in the following manner:

While the day has gone by when any one of us fear the electric light as a possible rival, we are not insensible to the fact that paraffine oil, from its present low price, is a rival which we cannot afford to despise. And more especially is this the case in many of the smaller towns and villages, where the charge for gas is of necessity higher than in the larger towns,

Doubtless, with oil there is not the same cleanliness as with gas; while there is also more trouble, attention and considerable danger attending its use, still, in these "hard times," most people are inclined to adopt the cheapest article, even at the cost of these drawbacks, so as to make their money go as far as possible.

But not only as an illuminant is it being brought into direct competition with gas, but also as a fuel and for cooking purposes, as well as for motive power. And I am inclined to think that the sooner we set about trying to solve the problem of how to meet this new competitor, the better.

A new departure has also recently taken place in the adoption of oil for gas making purposes. This, of course, is more fraught with danger to the coal master than to gas companies, inasmuch as, should this prove to be a more economical raw material from which to produce illuminating gas than coal, our present coal gas works could be easily remodeled and turned into oil gas works. This process has recently been introduced into a village in Fifeshire. And I have made it a point to visit and inspect the works, which have been converted into an oil gas works, so that I might be able to lay a few particulars before you. The process, however has not been in operation long enough to enable me to give you much information on the subject, especially in the way of details of cost, working expenses or permanency of the gas under varying and low temperatures. The patentees claim that they can produce 100 cubic feet of 60 candle gas from a gallon of oil, or at a cost of 3s 11d per 1,000 cubic feet for oil, fuel and labor; no more expense being incurred as the gas does not require purification.

At Colinsburg (the village alluded to) I was informed that the man sent by the patentees could produce 100 cubic feet of gas per gallon of oil; but they had no means of testing the illuminating power. The gas company's own servant, however, only produced 80 cubic feet per gallon, which they attributed to his want of experience in knowing the proper heat at which to work the retorts. Whether or not this was so I cannot tell; but of this I am certain, that the statement made that the gas does not require purification will not bear investigation. When I tested it for sulphureted hydrogen and for ammonia, both were indicated in such an unmistakable manner as none of us would care to see in our coal gas as sent out to the consumer.

Early Oil Freighting on the Allegheny.

The following interesting reminiscences of early oil days were furnished the *Derrick* by Mr. Wm. M. Lecky for the quarter centennial edition, and will doubtless prove acceptable to the readers of the REPORTER:

"I came to the city of oil in February, 1863, and was employed in the warehouse of R. D. Cochran & Co., the same being located on the Moran lands, at the lower end of the Third ward. Squire Thomas Parker, an uncle of William and George Parker, still living here, kept the Parker House close by, and this was a headquarters as well as stopping place for us early settlers. He was a fine old gentleman, and his wife a most competent hostess. Our firm transacted a general warehouse and freighting business in general goods, but made the forwarding of oil to Pittsburg a specialty. We also bought and sold oil. We had a towboat called the "Tiber," and it was part of my business to rustle around and get freight in seasons when the water was up for our boat.

She made one trip in the winter 1863-4 which I shall ever remember. I will tell you about a $4,000 trip the towboat made. "At the date mentioned, and I think it was a short time before the holidays of that winter, the weather was as mild as summer, heavy rains had fallen putting both the river and creek in good boating stage. As near as I can remember on the Friday of that week there was a large and very successful pond freshet. The price of oil was at a good figure and all the towboats were up from Pittsburgh and every one wanted to get their oil to market, My principal competitor was Bob Magee, he being employed for another boat. Bob placed his rates at $2.50 per bbl. to Pittsburgh. I thought $2.00 per bbl. was enough. So I secured 2,000 bbls. of oil for the Tiber's trip. But I am geting ahead of my story. On the Saturday following the Friday spoken of came the most sudden change of weather I have ever known in the oil country. It turned cold, with snow and wind blowing a blizzard and ice formed so fast in the river the large fleet of oil boats was frozen fast to the ice. On Sunday the ice broke up, owing to a gorge that had formed, and a general wreck and smash of the boats took place. While the destruction of boats and loss of oil was extensive, yet a number of them were only caught in the jam and from these the oil was taken and stowed on shore. By Monday afternoon the Tiber was ready for the trip, and I was greatly relieved when I saw her headed down the stream for Pittsburg.

But our troubles were not yet over. The boat had to lay up that night at Franklin and was forced to make fast to the shore. Here, for a greater part of the night it was thought the Tiber and her barges would be ground to pieces by the ice. But she fortunately escaped. The river became well cleared of ice that night and the trip was made in safety. Of course prices for freight varied. We have taken oil to Pittsburg for 25 cents per barrel, though freights went up sometimes to $2 50. Yes, we suffered some from fires, and the flood of 1865 swept us completely. But still we all managed to scrape along.

A busy sight was presented along the river front in those days. The landings, warehouses and oilyards extended from the Moran House to the mouth of Oil Creek. The river was generally crowded with boats, laden and empty, and the yards were piled up with oil barrels. By team and the creek the empty barrels were being constantly taken, and after being filled at the wells were brought back again. Oil City so far as the Third ward was concerned, presented a busier appearance than it does now, and cash transactions exceeded those of to-day by thousands as compared to hundreds. The old front looks desolate enough now, and of the men who were prominent in that line of business only W. J. Young, T. B. Simpson, I. M. Sowers, the Parker and Fisher brothers, myself and a few others remain here. The rest are dead or scattered over the country.

The A. V. Railroad, when completed to Oil City, finished up the shipping of oil by the river and ended our vocation. It may come back again when the Allegheny is slackwater. ed but by that time us old-timers will not be in position to take much interest in it. I have every confidence in the prosperous future of Oil City, and it is to-day the best town by all odds on the Allegheny river above Pittsburg. So long."

Exports of Mineral Oils for June, 1887.

Mr. Wm. F. Switzler, Chief of the Bureau of Statistics, submits the following statement of the exports of domestic mineral oils from the United States for the month of June, 1887:

MINERAL, CRUDE.
(Including all natural oils, without regard to gravity.)

	Gallons.	Dollars
Total for June, 1887	4,174,175	262,542
Total for June, 1886	6,492,443	429,392
Total for 12 months ending June 30, 1887	76,059,269	4,859,991
Total for 12 months ending June 30, 1886	80,033,856	5,843,291

NAPHTHAS.
(Including all lighter products of distillation.)

	Gallons.	Dollars.
Total for June, 1887	1,564,440	129,439
Total for June, 1886	957,375	82,231
Total for 12 months ending June 30, 1887	15,642,645	1,360,332
Total for 12 months ending June 30, 1886	12,106,299	904,241

ILLUMINATING.

	Gallons.	Dollars.
Total for June, 1887	47,072,134	3,616,231
Total for June, 1886	47,970,414	3,828,677
Total for 12 months ending June 30, 1887	464,433,085	36,960,977
Total for 12 months ending June 30, 1886	463,931,634	40,050,203

LUBRICATING AND PARAFFINE OILS

	Gallons.	Dollars.
Total for June, 1887	1,076,079	215,439
Total for June, 1886	1,038,767	213,447
Total for 12 months ending June 30, 1887	19,711,044	8,085,595
Total for 12 months ending June 30, 1886	12,188,156	2,432,320

RESIDUUM.

	Gallons.	Dollars
Total for June, 1887	4,116	368
Total for June, 1886	262,122	14,689
Total for 12 months ending June 30, 1887	3,248,860	156,579
Total for 12 months ending June 30, 1886	3,223,500	188,594

TOTAL EXPORTS OF MINERAL OILS FOR JUNE.

	Gallons.	Dollars
Total for June, 1887	53,890,944	4,224,019
Total for June, 1886	58,721,020	4,568,436
Total for 12 months ending June 30, 1887	576,094,883	45,423,474
Total for 12 months ending June 30, 1886	541,483,375	49,478,649

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(Continued from page 4.)

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Purple Brown,	Mineral Black,	Rose Pink,
Spanish Brown,	Chinese Blue,	Dutch Pink,
Vandyke Brown,	Prussian Blue,	Chromes, all shade
Walnut Brown,	Soluble Blue,	Vermilion.

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Samples sent upon Application.

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CHROME YELLOW, all qualities.
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Oil Colors, Mixed Paints, Tinted Paints in paste form.
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Strictly Pure White Lead,

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Carriage Black

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Ready mixed for repainting old Carriages, Buggies, Sleighs, Etc.

The only successful Ready Mixed Carriage Black on the Market.

One Coat gives an old buggy or sleigh the Blackest Black you ever saw and a handsome gloss without Varnishing. It is a combination of Paint and Varnish and contains no Asphaltum. It is very Tough and Durable and will not Crack. It will out-wear the ordinary carriage paint twice over. It dries hard in a few hours. No Rubbing! No Varnishing! No extra Trouble! It Sells Like Hot Cakes! Where known, a case lasts a dealer but a few days. Each can contains more than enough to paint a carriage. Put up,—Two dozen cans in a case. Show Cards, Spoke and Circular in each Case. Retailed at One Dollar per Can. On this the Dealer makes a handsome profit.

We were the inventors and originators of this ready mixed black paint, now so popularly known as Carriage Black, in which the paint and varnish are so combined as to give a good body of black and a handsome gloss in on coat, without varnishing or rubbing. Many small concerns are trying to imitate our Carriage Black, but without success. Some are trying a line of colored paints and recommencing them to do the same work as our Carriage Black, but it is impossible to make a paint of this nature in the bright colors. We make a ready mixed Carriage Wine Color that is a very fair paint, but not so good as our Carriage Black. Our Carriage Black is very near perfection in its line, and none of the imitations are any where near as good! Do not be deceived into buying the poor imitations, on account of a little cut in price, when the genuine, old, tried, and successful Detroit White Lead Works' Carriage Black, can be had for a reasonable price!

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Granulated, 1 cent per lb. extra.

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Owing to the increased demand for Powdered Carbonate, we have decided to reduce its price from 2 cents to 1 cent per pound additional; at the same time calling our customers' attention to the advantages and economy in its use over lump.

Our Carbonate is packed in good, tight barrels, sized and lined with cloth, and *we guarantee it equal to any in the market.*

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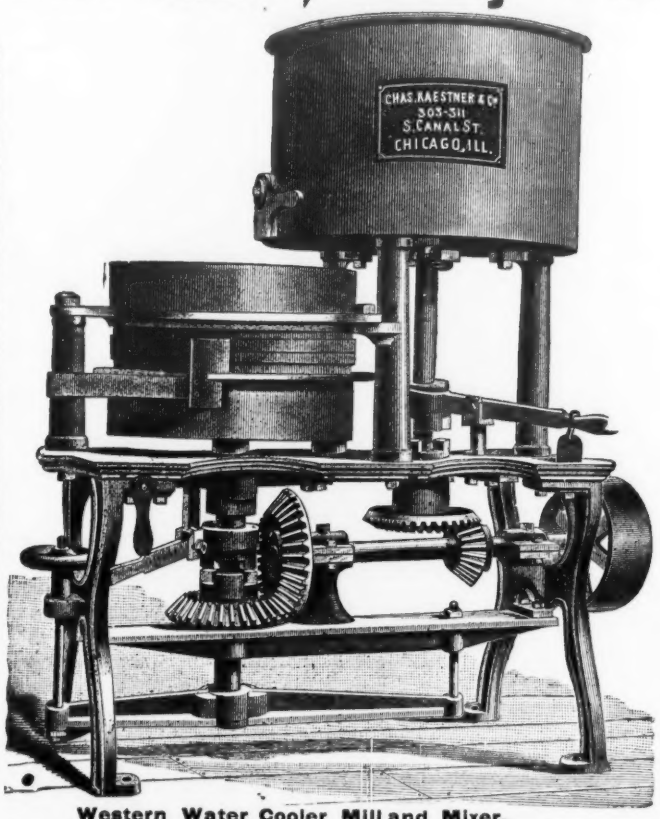

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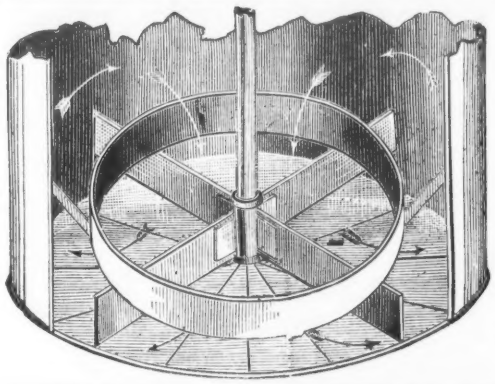

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We make a perfect Mixer and guarantee it as such, for preparing

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THE PERFECT LEATHER DRESSING.

TERMS AND CREDIT VERY LIBERAL TO ALL BUYERS.

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FAVORITE HARNESS OIL

THE ONLY SATISFACTORY CHEAP OIL.

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"Macy's Prime" Lard Oil.

SPERM, LARD, WHALE, COTTONSEED, ELAIN AND RED OIL,
"CLEMENT'S" CORN STARCH, IN BOXES AND BARRELS, for Export and Manufacturers use. AGENTS FOR L. Z. O. OXIDE OF ZINC,
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INGALLS & COMPANY,

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Illuminating and Lubricating Oils,

AGENTS FOR
Wilson & Evenden's Oil Tanks and Shipping Cans.
OFFICE, No. 46 JEFFERSON AVENUE, - - - DETROIT, MICH.
We Will Buy Good Second-Hand Carbon Oil and Naphtha Barrels.

N. K. Fairbank & Co.,

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CHICAGO - ST. LOUIS - OMAHA - NEW YORK.
PRINCIPAL OFFICE AT CHICAGO.
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"FAIRY SOAP."

The "Fairy" Brand is the Purest Soap ever manufactured. We warrant it far superior to any imported Castile Soap. Send us a trial order.

Lard Refiners, Oil Pressers, Soap Makers.

MANUFACTURERS OF

Extra Double Refined Acidless Lard and Tallow Oils

AS WELL AS ALL GRADES OF

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Our Acidless Products are warranted not to contain above one-quarter of one per cent. of Free or Fatty Acid.
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N. B.—The best brands of Butchers' and Packers' Tallow contain from one to ten per cent. fatty acid.

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Every description of Corks on hand and Cut to order. All Sizes **BUNGS.**
Hard and Soft Wood Taps, Bungs, Spiles, Caps, Bottling Wire, Cork Driving and Capping Machines, Capsules, &c.

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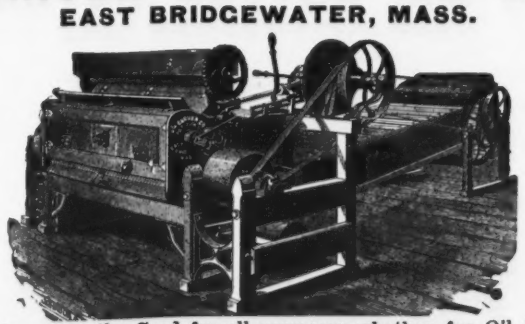

This Linter improves the Seed for all purposes, whether for Oil, Feeding Stock or Planting. Correspondence solicited.

OIL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small lots must expect to pay n advance on these figures.*

The prices current will be found on page 49.

Vegetable Oils

TUESDAY EVENING, July 12.

The linseed oil market is quiet but very steady at previous prices of 49c for city and 47c for western on spot. Operations in the seed market have no effect upon oil as the business in seed is too light and the quantity offering too limited to have any bearing. It is expected that a largely increased demand for oil will occur next month for the fall trade as usual, and as supplies in the West are represented to be very limited, it is probable that the market will be influenced upwards. Operators in seed look for higher prices when new crop is offered, owing to reports of an important decrease in yield, which will gather in force and be energetically circulated between now and the opening of the season.

The cotton oil market is passing through a new and unexpected experience, which may be only a leading feature of the market temporarily. We refer to a cut in prices which was announced on Monday. Crude oil has not participated in the decline for the simple reason that there is scarcely any to be had, 35c being demanded for the few stray lots of prime oil on the market. The chief interest has centered in summer yellow, which is now sparingly offered at 39c per gallon for prime grades, a decline of 3 @3½c per gallon. This is not general, however, as some holders are still adhering closely to 42c and claim to realize that figure. An argument for the high quotations has been a scarcity of prime oil, and it was expected that the market would continue firm until new crop oil was offered. Buyers acted under this belief and were satisfied to pay the higher prices asked. As an argument for the decline it is stated that the movement of oil was not satisfactory; that large buyers were conspicuous by the absence of their orders, and that the position of the lard and other markets does not justify the former high prices asked for cotton oil. As the late consumption of the latter is not up to expectations, the visible supply of oil is represented to be ample to supply all wants. Thus a firm market has been changed to a declining one, to the astonishment of traders who were anticipating better things for the heated term. At the moment the feeling is steady at 39c for prime summer yellow, and 43c for white summer, except in the case of some holders who insist on quoting 42c for summer yellow in quantities of 25 bbls and upwards. Jobbers have not altered their views, as they believe the change to be temporary. No material change is to be noted in the price of the winter grades as yet, but they will in all probability be placed at figures to correspond with summer yellow, if the decline is permanent; this is a question which no one is prepared to answer as it depends upon the outlet. Soap stock is not receiving any attention, and the price is nominal.

Exports of cottonseed oil from New York by countries

To	For Week ending July 11, 1887. Bbls.	Since Sept 1, 1886. Bbls.	Same time last year Bbls
Africa	..	..	11
Arg. Republic	..	11	6
Australia	..	96	49
Austria	..	2260	3612
Belgium	..	1060	230
Brazil	..	91	300
Br West Indies	12	1259	534
Br Guiana	..	30	2
Canary Islands	..	..	..
Central America	..	16	4
Chili	..	169	8
China	..	..	1
Cuba	..	1	3
Dan West Indies	..	154	68
Denmark	..	4	4
Dutch West Indies	..	6	.
Ecuador	..	7	..
Egypt	..	..	..
England	..	3336	5374
France	..	4275	14159
French West Indies	..	1366	196
Germany	..	876	1674
Hayti	1	56	11
Italy	..	553	3621
Mexico	11	16	..
Netherlands	..	22371	325
North America	..	184	54
Peru	..	..	5
Pto Rico	..	1	.
Scotland	53	154	54
Spain	..	..	..
Turkey	..	..	..
U S Col	..	46	22
Venezuela	..	24	17
Total	77	38541	32368

Exports of cottonseed oil from New Orleans by countries:

To	For week ending July 9, 1887. Bbls.	Since Sept. 1, 1886. Bbls.	Same time last year. Bbls.
Austria	..	2000	15705
Belgium	..	1950	....
England	..	4823	3447
France	..	2825	23629
Germany	..	1116	150
Gibraltar	..	6090	23317
Italy	..	3400	25130
Netherlands	..	2843	..
Portugal	..	..	2
Spain	..	2000	400
Total	..	26046	91380

Exports of soap stock from New Orleans by countries:

To	For week ending July 9, 1887. bbls.	Since Sept 1. 1886. bbls.	Same time last year. bbls.
Cuba	..	..	165
England	..	3990	3807
Italy	..	2	15
Spain	..	..	...
Total	..	3992	3987

The better feeling in Ceylon cocoanut oil noted in this column last week was of short duration, as we have moderate sales at 5¼c and this price would still buy, although most holders are quoting 5⅝c; the demand is light. Cochin oil is still jobbing at 7¾c, and English cocoanut oil is nominally held at 5¼c to arrive.

The olive oil market has been relieved of 10,000 gallons which were sold on private terms but said to be at 60c. The grade is said to be Spanish and that the lot was taken for Government use. Holders are inclined to be a trifle firmer in their views in consequence, but it is difficult to realize higher prices. The market is quoted at 67c for pure oil.

Palm oils find few buyers and there has been no occasion to change prices

Animal and Fish Oils.

No particular change is to be noted under this head. Business is very quiet in all departments and there is no occasion for any fluctuations in prices. Lard oil is offering at the usual figures of 53@54c for prime city and prime western at 52@54c. The feeling is steady and according to other markets there is not likely to be any immediate change; business is not up to expectations. Winter pressed oil is quoted at 58@60c, but ice pressed oil at 54c is taken as a substitue by some buyers.

Crude sperm oil is weaker and selling at 68c in New Bedford, at which figure we have sales of 400 bbls for domestic use. Receipts of oil are about half of what they were last year, still there is an abundance to go around from a stock of 19,265 bbls in the East. The refined market is excessively dull and unchanged.

Crude whale oil is firm on account of very limited supplies. A sale of 160 bbls Southern for domestic use brought 32c. No fresh arrivals are reported. Stock at New Bedford is 6,085 bbls. The refined market is sympathizing with crude, but quotations have not been revised.

Whalebone has been taken to the extent of 5,000 lbs Arctic for export on private terms. The market is quoted at $3 45. As this figure is too high for speculation the market is devoid of interest. The stock is divided as follows:

New Bedford—Arctic	9,900	54,000
" " Jap & Ochotsk	34,900	
" " South Sea	10,100	
New York—Arctic	47,000	47,000
" " Jap & Ochotsk		
Total		101,000

Elephant oil is meeting with a moderate demand at 55c for bleached winter and 51@52c for natural winter. The market is steady.

The menhaden oil market has not been altered in any particular since last writing. As local manufacturers have not been in the market for some time, it is thought that their wants will be made known soon, and it is intimated that some export business would be done at a certain figure which holders are not inclined to entertain. So far the feeling is steady at 21½@22c and the market featureless. Some remarks are made in our editorial columns which will prove of interest to those identified with the trade.

Cod oil finds a limited outlet at former prices. The demand is generally for pure oil.

Mineral Oils.

In regard to the effort to combine the Scotch oil companies, a visitor from that section who is familiar with the situation states that a pool will never be formed as only the struggling concerns desire co-operation; the few companies able to take care of themselves in a manner, are determined to remain independent and await the winding up of their smaller competitors. It is a struggle of the survival of the fittest and the outcome is not reassuring. A committee has the plan of combination under consideration. In the meantime, prices are below the profit yielding point and consumers are receiving the benefit. The cause is attributed to American competition.

The export movement of lubricating oils for June shows an increase over the same month last year. The public have become so accustomed to a monthly increase of the foreign outlet that a contrary showing would be a sore disappointment. The total excess shipments for last month amounted to 37,312 gallons, and for the year ending June 30 a still better exhibit is made, the total shipments aggregating 16,711,044 gallons in comparison with 12,188,156 gallons for the same period last year. Philadelphia shipments decreased almost 30,000 gallons last month when compared with the previous June, and for the year there was a compara-

REED, HALL & HEWLETT

18 & 20 PLATT ST., NEW YORK.

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Valve, Cylinder, Signal, Machinery, Engine and Lubricating Oils.
Sperm, Lard, Tallow, Neatsfoot, Whale, Elephant, Seal, Cod and Fish Oils.

Pure Spanish and Italian Olive Oils.

All grades of Pure Olive Oil Soap for Silk and Worsted Mills, either in bulk, bars or powdered.
Saponified Red and Elaine Oils.
Mineral Wool Oils and Wool Stocks.
Castor, Rape, Mustard and Cottonseed Oils.
Paraffine Oils, Paraffine Wax and Beeswax.
All kinds of Lubricating and Axle Greases.
Tallow, Lard and Cottonseed Grease for Soap Makers.

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West Virginia Oil Company
PARKERSBURG, W. VA.
Producers of Pure Natural West Virginia Rock Oils.

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COTTON EXCHANGE BUILDING,
NEW YORK CITY.

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Future City Oil Works.
J. J. POWERS & CO., ST. LOUIS, MO.,
Refiners and Manufacturers of CRUDE, REFINED AND BLEACHED
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Pure Winter Pressed Miners' Oils, White and Yellow, the best BURNING oils prepared for Miners' use; Superior to LARD OIL and at LESS COST Guaranteed to remain limpid at Freezing Point.
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Cottonseed Oil, Cake and Meal Reginnings & Soap Stock
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—ALSO—
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has been introduced this fruitful source of annoyance and dissatisfaction has been largely done away with and there is now no excuse for the trade's selling poor wicks or for consumers' accepting them. It is made from pure, long staple cotton, is woven with absolute uniformity and is chemically treated during the process of manufacture in a way to remove the last vestige of foreign substances. The result is a ***PERFECT WICK*** which is now sold and recommended by the very houses--the lamp, burner and oil dealers--whose interests compel them to recommend the best wick made.

We make wicks for every style of burner in the market. For samples, prices and all information, address

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72° Deodorized Naphtha, for the Manufacturing of Varnishes, Dryers, Liquid Paints, &c.

60 °Deodorized Naphtha, for Dyers, Scourers, and Druggists' general use.

76° Deodorized Naphtha, for Vapor or Gasolene Stoves; for Extracting Oil and Grease from Hides, Cotton Waste, &c.

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Pratt's Boulevard Gas Fluids, for use in Naphtha Street Lamps,

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N. B.—All the above products are manufactured with especial regard to PURITY, and we invite comparison with the goods of any other refiners.

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OFFICES,
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tive decrease of 11,607 gallons. All the other ports show an increase.

The paraffine oil market is receiving considerable attention, owing to the talk of low prices. Most brands of prime 25 gravity are held at 8¼c, and we are informed that this price is being realized on the usual terms: but there is no question of 8¼c being accepted from any buyer of 50 bbls of other brands, and we know of 8c causing a movement of prime 25 gravity, but there is a hesitancy to make such a low figure known. Some manufacturers decline to meet the price of other brands and are demanding an accession to their terms or no business. This would indicate a changed feeling in the market—a feeling of independence which no doubt can be maintained if it is closely adhered to. Paraffine oil as a staple article should command a higher figure in the opinion of holders, and consumers can afford to pay more for it. Competition seems to be centered solely on 25 gravity, as the other grades receive no special attention and continue to rule at steady prices. It is expected that fluctuations will always be a feature of the market for 25 gravity.

The trade in neutral oils, cylinder stocks and black summer oil is quiet and without any new feature. Prices are the same in every particular, as there seems to be no occasion to change values. There is no haste to convert stocks into money, and every holder has confidence in the market.

Wax, Candles, Lard, Tallow, Etc.

For some reason or other paraffine wax manufacturers are firm in their views. While no stated reason is assigned, it is to be presumed that they prefer to hold stocks rather than sacrifice them. It is alleged that no prime crude wax of 128@128 melting point can be bought under 3¼c, and that some business in 116 test has been done at 3¼c per lb. The inquiry is reported better, and bids are being made. The fact is that transactions are conducted so quietly that the outside world cannot learn what is going on, as buyers are bound to secrecy, and the actual terms of each sale can only be learned through indirect sources. Cash is of course favored, and liberal quantities on spot cash are no doubt moved at low rates, which are strictly private. Refined wax is unchanged in any particular.

The lard market is improved in price and activity so far as spot transactions are concerned, but options are neglected, and speculation is therefore quiet. Western steam on spot is selling at 6 81@6 85c, and city steam at 6 50c, with moderate demand. Refined is quiet and steady at 7@7 50c.

Lard stearine is held at stronger prices, but quoted unchanged at 8¼c for choice city and 8@8½c for Western. Oleomargarine stearine is in light demand, with choice city quoted at 6 ¾c bid and 6¼c asked. A lot of 7,000 lbs in barrels changed hands at 6⅞c.

The tallow market is slow but steady at 3⅜c for prime city.

Oil Seeds.

See Chicago letter on another page.

Oil Cake.

All the business is being done by consignment, and the weekly shipments are decreasing spot stocks somewhat. No sales have occurred in this market since last writing, and present indications don't favor any early business. Holders hardly know what to quote, and the market may be considered nominally the same as this time last week, viz: $21 25@21 50 per ton for Western cake on spot. It is thought, however, that business would not be entertained at these figures, as the decrease of supplies is strengthening the feeling.

Naval Stores.

Spirits Turpentine—Again we are compelled to report a quiet market for this article. The arrivals have been very free, and although it was claimed these went direct to consumers, yet, as was natural, it had the effect of quieting the market to a great extent. Reports from the primary sources quoted the market as easy and this also had its effect. The business during the week has at no time exceeded jobbing proportions, and the bulk of this has been in a small way. The market closed dull to-day at 33½c.

Rosins—The market has been exceedingly dull during the past week. What business has been done has been in low grades for home consumption. Values have merely been quoted nominal, there being practically no purchasers, the foreign buyers claiming they were limited in price. It is apparent that prices are getting down to that point, where shippers can certainly come in, and it appears reasonably certain that business will follow at an early date. The market closed dull to-day, as follows: Strained $1 05, good strained $1 10, E $1 20, F $1 35, G $1 45, H $1 50, I $1 65, K 1 80, M $1 95, N $2 10, W G $2 50, W W $2 85.

STOCK ON HAND AT

	Spirits.	Rosin.	Tar.
New York, July 11.....	2,063	24 619	858
Savannah, July 8.....	11,169	51,371	....
Wilmington, July 11...	5,868	40.384	3,545
Charleston, July 9.....	2,672	24,499	....
London, June 18.....	8,230	....	....

Under date of Wilmington, N. C., July 8, 1887, Messrs. S. P. Shotter & Co. say:

STOCKS AFLOAT AND ASHORE JULY 9, 1887.

	Ashore. Bbls.	Afloat. Bbls.	Total. Bbls.
Spirits.....	3,546	2,322	5,868
Rosin.....	76,916	3,468	80,384
Tar.....	3,390	155	3,545
Crude.....	765	....	765

RECEIVED AND MANUFACTURED.

	Spirits.	Rosin.	Tar.
July 1 to 9, 1887...	2,374	5,460	228
Last year	2,179	9,837	319
Crop to date.....	31,645	89,954	14,691
Same time last year...	12,461	108,062	18,363

DOMESTIC EXPORTS.

	Spirits.	Rosin.	Tar
New York.....	460	391	495
Sundry.....	..	98	404
	460	489	899
Total foreign.....	500	14,877	...
Total exports July 1 to 9, 1887.	960	15,336	899

New Bedford Letter.

NEW BEDFORD, July 11, 1887.

The crude sperm oil market has been dull the past week, with sales of 460 bbls for manufacture at 68c. The market closes dull and firm at the quotation.

The crude whale oil market has also been dull the past week, with sales of 160 bbls Southern for manufacture at 32c, and the market closes firm at the quotation.

In the City Court of Brooklyn last week Gerald A. Seymour commenced a suit for $10,000 against Alden S. Swan and Charles N. Finch, composing the firm of Swan & Finch. Mr. Seymour says that on the 25th of June of this year the defendants caused his arrest on a Saturday, and he had to remain incarcerated until Monday, the 27th of June. Then he was taken before the magistrate, who ordered his discharge. He had been engaged as salesman in the South, and upon his return was accused of embezzlement, with the result stated.

TRADE REPORTS.

London

Under date of June 20, 1887, Messrs. John Angus & Co. say:

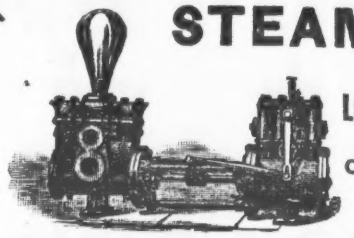
Ammonia Sulphate—Within the past two weeks the market has entirely recovered from the inactivity which characterized it during the latter part of May, and we have to report an advance in prices in all positions. The demand from Germany is the principal feature at present, the ideas of buyers in that market having exhibited an important change during the past week. Business has been done in Germany at prices which have not been touched in that market for many months, and there is still a large inquiry for July to September delivery. The French and Belgian markets are by no means so animated, and they do not appear to follow readily the present situation, and even Germany holds back strenuously in face of present prices, and will engage only for actual immediate requirements. Quotations to-day are as follows: London makes on basis of 25¼ per cent, £12 12s 6d net cash; good grey 24 per cent in bags, f o b Hull or London, £12 10s less 2½ per cent; good grey 24 per cent in bags, Leith, £12 5s less 2½ per cent. But before any extensive business can take place at those prices, a farther advance in Continental ideas must be established. On the dark subject of stocks in this country, it is difficult to arrive at the truth, but there is little doubt that up to the present they have been well held, and will now probably come out more freely under the influence of higher prices.

Bones and Bone Ash—Low prices still rule in this market, the recent transactions in this country having been at £4 15s for bones and £3 10s for ash, on basis of 70 per cent. River Plate cargoes are being diverted to some extent to the United States, where better prices are obtained.

Nitrate of Soda—The agricultural season being nearly closed, prices for cargoes at port of call have given way and the latest sale in that position is reported at 8s 9d Continent. The arrivals during the first fortnight of June were about 22,000 tons, but there have been none during the past few days, and there is nothing now awaiting orders. The market in cargoes for July to November shipment has been quiet, and buyers have of late been less disposed to operate, but holders remain very firm at the following limits: May-July shipments 8s 7½d U K, 8s 10½d Continent; August-September shipments 8s 9d U K, 9s Continent; September-November shipments 8s 11½d U K, 9s 1½d Continent. The shipments to Europe in May were 36,000 tons. The stocks in Europe are still small, and the consumption during the past season has been on a very large scale. The consumption for next season will probably be larger still if consumers are able to secure their requirements at anything like present prices.

Phosphates—Business is possible only at prices which cannot remunerate the producers, but still there is business doing mostly for immediate delivery. Canadian phosphate is quoted at 10½d per unit for 75 per cent, while 80 per cent is scarce and held for higher prices. Carolina phosphate has within the past few weeks been sold at the lowest price on record. In Belgian phosphate business is very dull, and quotations uncertain and nominal.

STEAM PUMPS



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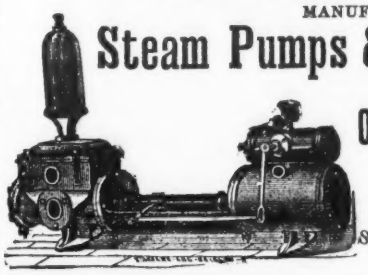

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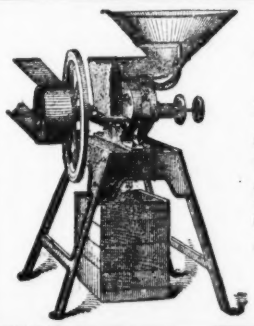

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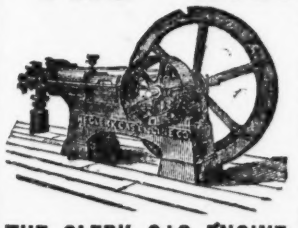
Dear Sir:—The Empire City Mill purchased from you has given perfect satisfaction. I have ground through it several thousand pounds of Ginger Root, and expect to grind many more pounds. It appears to be in complete order, and does the work as well as on the first day.
Yours respectfully,
R. L. DeLISSER.

The Clerk Gas Engine.



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No Boiler, Coal, Ashes or Engineer. Made in Sizes of 3, 10, 15 and 25 H.-P.
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Repressed Tallow Oil,
Free from Stearine and Acid. Does not become rancid. Guaranteed Pure,
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Your tallow oil proved to be as represented—free from acid and stearine. D. A. STUART & CO., Chicago.
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DEALERS FURNISHING LUBRICANTS TO CONSUMERS ARE INVITED TO SEND FOR SAMPLES, ETC.
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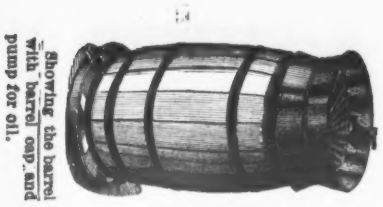
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Mica Axle Grease is very satisfactory in every respect. *Quite superior to any axle grease we have ever used before.*
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We endorse the above.
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I have a large sale of Mica Axle Grease. *It wears three times as long as any I ever used.*
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I have used Mica Axle Grease for about *eight years* with the very best satisfaction. *It doesn't run off the axle in hot weather; and it doesn't chill and harden in cold weather.* I have used almost all other makes of axle grease *and consider the Mica worth more than twice as much as any other for my use.*
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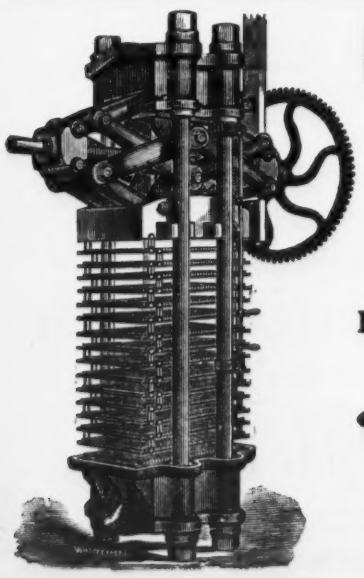

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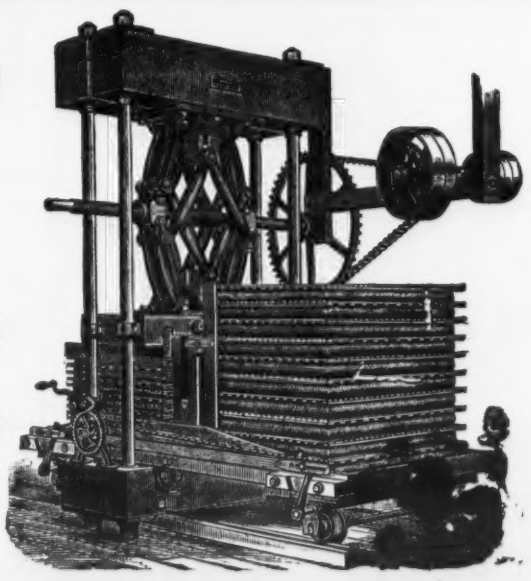

Potash Salts—Muriate of potash 80 to 85 per cent, £7 8s per ton in bulk, on basis of 80 per cent, f o b Hamburg. Kainit 23 to 25 per cent, £1 8s per ton in bulk, f o b Hamburg. Calcined kieserit 70 to 75 per cent, £1 18s 6d per ton in bags, f o b Hamburg.

Under date of June 23, 1887, Messrs. Rose, Wilson & Rose say:

Poppy Seed—Calcutta being scarce would command 36s 6d present steamer shipment. Cottonseed quiet. Spot London £5 18s 9d@£6; shipments £6. Hull £5 18s 9d. old crop, £5 15s new. Copra steady. Singapore £14 15s@15. Australian £14 15s.

Rape and Seed Oils—Brown rape oil is fairly steady, but not much business. Spot and all positions to December £32 10s@32 15s. English refined £24@24 5s. Cotton oil firm. Crude £19 15s. Refined £21 15@22 5s. Hull spot £20 12s 6d: July-August £20 12s 6d. November-April £18 5s.

Olive oils quiet and only a nominal business passing. Mogadore offers at £31.

Cocoanut oil is in fairly good demand, although in fairly good demand athough more particularly for forward position. Ceylon on the spot is held firmly for £24 5s, and a fair amount of buusiness has been doing for present shipments at £24 15s. Cochin still rules at £31@32 on the spot, but firmer for arrival, April May shipment is held for £30 10s. and for June-August £30 paid, which price is now asked for July-September, Mauritius £30.

Tallow—St. Petersburg yellow candle 30s. "sorts" are firm. Good to fine Australian mutton 23s@24s 6d. Beef 21s 6d@23s. Lower descriptions 3@6d better.

Fish Oils—Sperm is still very slow, and quotations quite nominal. Common sorts are steady. Norwegian whale rather better price paying. No. 1 £19 10s, down to £11 for dark.

Naval Stores—American spirits of turpentine is steady. Spot is 27s 6d@27s 9d, and September-December 25s 9d@26s,

	1887. Bbls.	1886. Bbls.
Deliveries for the week ending June 20th	1,739	1,244
Stocks	8,040	21,293
Landing	...	...
Afloat	9,371	1,500

Petroleum Oil—Market is inactive, and prices are unchanged. Spot is 5 5-16@5 7-16d, and September-December 5 17-16@5 9-16. The deliveries since January 1st have been 297,151 bbls., against 293,123 bbls. same time last week.

	1887. Bbls.	1886. Bbls.
Deliveries last week	3,888	5,773
Stocks this day	83,730	107,031

Under date of June 25, 1887, Messrs. F. W. Bowyer & Bartleet say:

Colocynth—Demand fallen off, and no business has been done.

Galls—Market continues inactive, but holders are not disposed to give way, and prices remain steady. Blues have been dealt in to a small extent at 58@59s. Retail sales green at 50s. White neglected. Smyrna—Supply is moderate, but the sale is very slow. Morea scarce but without demand.

Gum Arabic, Trieste—The stock of all qualities is small, but the demand is restricted. Holders show more disposition to realize. Senari—Supply small. Nothing doing. Egyptian—Market bare of stock. Turkey Sorts—Supply is very small, but demand limited, Ghezirah—There has again been a fair inquiry, and sales have been effected at advanced rates, 80s having been paid, at which price there is very little now offering.

Gum Tragacanth—The demand for the lower grades continues, and at sale yesterday a considerable quantity was disposed of at full to higher prices. Thirds realized £7 10s@8 5s, fourths, etc., 20s@£7 5s. For seconds there is very little inquiry, and only retail sales were effected at £9 10s@10 for fair to good. Hog—Supply is moderate and demand limited. Fine has realized 27s 6d@75s, and lower qualities 25s @50s. The Syrian descriptions are in large supply and almost unsaleable. Nothing done. Smyrna—The supply of fine is small, for which extreme prices are demanded. Several small parcels of lower qualities are now offering, but nothing has been done.

Gum Mastic—Demand continues very restricted, and no business has been done. Some further parcels are to hand.

Opium—This market continues firm, a fair amount of business having been done. Fine Karahissar, as well as seconds, has been taken for Turkish account at full prices, and Gheve, dry Tokat and Salonica have been bought by manufacturers. Fine old Tokat has realized 16s 6d, but for fine new there has been no inquiry. Fine Malatia and Salonica have not been dealt in; owners remain firm. The new crop of these kinds is reported to be unusually small. Persian is unchanged.

Otto Roses—Fair stocks. There is very little inquiry, as consumers chiefly do business direct.

Salep is inquired for. Supplies exhausted.

Senna—Some fresh parcels have come to hand. Demand limited for all qualities.

Scammony—Fine quality is wanted, and would sell readily. The lower qualities are plentiful, and very difficult of sale, although easier prices would be accepted. Skilleep—Supply large, and sale is very slow.

Roots—Very little inquiry.

Yellow Berries—Market steady but inactive.

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Miners' Oils, Winter Yellow, Summer Yellow, Summer White, & Cooking Oil.
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GUM THUS. GUM THUS. GUM THUS. A SPECIALTY. **TAR OIL. TAR OIL. TAR OIL.**
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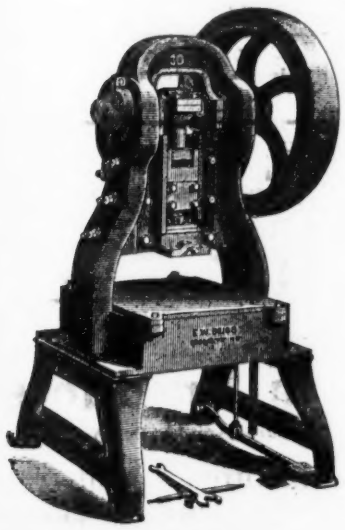

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PETROLEUM MARKET.

TUESDAY EVENING, July 12, 1887.

It was expected that after the national holiday week there would be an improvement in trade, but so far there have been no indications of such a change for the better. The week under review has proved one of the dullest in the history of the Consolidated Exchange. There is an almost entire absence of orders from outside operators and consequently the transactions are confined to the scalping operations of the regular board room traders. The variations in prices have been comparatively few in number and of so small extent that the opportunities for profitable investment are small, and this is doubtless one of the principal reasons why the outsiders refrain from giving the brokers an opportunity to earn commissions. The nine months' shut down in the Ohio fields has had no effect on the speculative market, but as if to offset any good influence comes the report of a new well struck near Toledo, which is a gusher of the Baku order, producing 3,000 bbls per day and flooding the surrounning country, being beyond all control. The monthly report of the pipe lines is printed on another page, but as there is nothing in the showing beyond what was anticipated no stir was made in the markets. A comparison with that for the month of June shows as follows: Decrease in acceptances, 394,000 barrels; increase in credit balances, 279,543 barrels; decrease in total liabilities, 114,458 barrels; decrease in gross stocks, 4,711 barrels; increase in sediment and surplus, 109,747 barrels: decrease in receipts, 78,673 barrels; decrease in deliveries, 267,903 barrels; excess of deliveries over receipts, 109 225 barrels; total deliveries, 1,798,610 barrels; total receipts, 1,688,785 barrels. The transactions during the week were the smallest of any full week in the history of the Consolidated Exchange, the sales footing up only 3,055,000 bbls, against 2 141,000 bbls during the preceding week, but in the preceding week were embraced only four business days. The clearances on the local exchange amounted to 11,842,000 bbls, against 9,344,000 bbls during the preceding week. The clearances on the Philadelphia Exchange was not received on Saturday and the total for the four other exchanges, with that omission, amounted to only 10,181,000 bbls. The highest price of the week was reached on Thursday last when 61⅝c was touched. The lowest point of the week was 60⅛c and was touched on Wednesday last. The opening price last Wednesday was 60⅜c and the close this evening was at 60⅝c, showing a decline as the result of of the week's trading of ¼c, while the extreme range of fluctuations for the week was 1½c.

The news from the producing fields has not been prolific in items of special interest. In the Washington field the big gusher of John McKeown, on the Martin farm, is still the center of attraction, its remarkable staying qualities being the wonder of all oildom. On Wednesday last this well was doing 130 bbls per hour, the next day it declined to 105 bbls per hour, but on Friday, after further drilling, there was an increase to 170 bbls per hour. Since then there has been a drop to about 120 bbls per hour. This is by all odds the most prolific well yet struck in the Gantz sand and the best producer in the whole field. The production of this field, as determined by Saturday's gauges, is about 9,800 bbls from 189 wells.

H. M. Dale finished a well on his own farm, two miles west of Egypt, last week, which is doing 6 bbls an hour. At Red Valley Hale & Co.'s well is doing about 25 bbls a day.

In the Reibold district Root & Johnson's No. 3, on the Blakeley farm, was agitated on Saturday and started off with 44 obls an hour. Phillips' well on the Gelbach farm, just tapped the top of the sand and exploded her boiler. Greenlee & Jack McTamney, No. 1, is finished and dry; no oil and very little gas was found, and the rock was very inferior. The production of the Reibold pool is 5,625 bbls from 74 wells. Mr. McKelvoy's well on the Duncan farm, is through the sand and dry; it was pumped, but nothing was found.

Along Oil Creek, Rhode Bros. are progressing slowly with their well on Kirkwood & Co.'s land. The Columbia Oil Company are drilling a well on the Columbia farm which is nearing the sand.

In the Grand Valley district, Black & Co.'s No. 3, on the Tallman farm, was shot a few days ago and is showing for a good well. Their No. 3, on the Fleming farm, southwest of No. 1, a 50-barrel well, is expected in in a few days. The Wege well, No. 2, at Pleasantville, is doing about 6 barrels a day. Kearney Bros., of Tidioute, have completed a well seven miles northeast of Pleasantville, on the Copeland farm. It has been shot and is reported doing 25 bbls per day.

In the Ohio fields the Jamestown Oil Co. completed a well last Thursday on the Cary farm, Findlay, which made a hundred barrels the first twenty four hours. This is significant, as the well is located midway between the big Pentzer and the Sherrick Oil Co.'s gusher. Downing, Collins & Co., on the J. M. Reed farm, Findlay district, completed a well Thursday which is showing for not more than twenty barrels natural. Brown & Elliott's well, at the Lawrence sawmill, was drilled in Saturday, and is showing for a 200-bbl well.

Accounts come from Toledo of a well which is producing 3,000 bbls a day. This opens up a new field, and the oil may differ somewhat in quality from that of the Lima field.

Wednesday, July 6.

The market opened at 60⅜c, which was the figure to which it had dropped at the close of Tuesday and this was also the highest price of the day. At first, although it was seen there was a weakening tendency, there appeared a determination to uphold prices, but when the effort was found futile the fractions were lopped off steadily until the lowest point of the day, 60⅛c, was touched, which was after an hour's slow trading. Then a couple of points were added and for the remainder of the day trading was mostly at 60⅜c, the price varying only a point either way and 60⅜c was also the closing figure, showing a loss of ⅛c for the day under a range of fluctuations of ¾c. Trading was very light and of the scalping order. The sales for the day footed up 779,000 bbls. There was no news of consequence beyond the report from the Washington field that the McKeown-Martin No. 5 was producing 120 bbls per hour and this, no doubt, had a depressing effect on prices.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	60⅜	12:30	60⅛
10:30	60⅝	1:00	60⅛
11:00	60¼	1:30	60¼
11:30	60⅜	2:00	60⅜
12:00	60⅛	2:30	60⅜
		3:00	60⅜

The clearances were as follows: New York, 1,456,000; Oil City, 704,000; Pittsburg, 386,000; Philadelphia, 220,000; Bradford, 310,000; total clearances July 6, 3,076,000 bbls.

Carrying rates were: New York, 45@50c; Oil City, 35@40c; Pittsburg, 40c; Bradford, 40c.

Market, July 6, 1886—65⅝@65¾c.

Thursday, July 7.

There was no change from the closing figure of last evening until some time after the opening, and 60⅜c remained the lowest point of the day. When the upward movement began it was not checked until 61¼c was reached, when a reaction came, the market selling down to 60⅜c, after which there were several ups and downs, and during the last half hour under a little spurt 61⅛c was scored, which was high water mark, but the close was at 61⅛c. This showed a gain of ¾c for the day under a range of fluctuations of 1c. Trading was again light and not affected by reports from the regions, though it was reported that the McKeown Martin No. 5 was still doing over 100 bbls per hour. The sales 837,600 bbls.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	60⅜	12:30	60⅞
10:30	60⅝	1:00	61
11:00	60⅝	1:30	61
11:30	61⅛	2:00	60⅞
12:00	60⅞	2:30	61
		3:00	61⅛

The clearances were as follows: New York, 2,238,000; Oil City, 654,000; Pittsburg, 986,000; Philadelphia, 238,000; Bradford, 358,000; total clearances July 7, 4,374,000 bbls.

Carrying rates were: New York, 40@45c; Oil City, 40c; Pittsburg, 40c; Bradford, 40c.

Market July 7, 1886—65⅜@65¾c.

Friday, July 8.

At 61¼c, the opening figure, the market appeared to have gained strength over night, but as this proved to be the highest price of the day, it was only due to the firmer tone at the close last evening. There was no important break at any time, but a gradual decline, with intervals of half an hour or an hour between the loss of each point. There were also very few fluctuations, and when a point was dropped with few exceptions it was dropped for stay. The lowest point reached was 6 ⅛c, and the close was at 60⅜c, showing a loss of ⅞c for the day, while the extreme between highest and lowest prices was 1c. Trading showed no improvement; in fact, it was even lighter than during the preceding days of the week under review, the total sales footing up only 6.0,000 bbls. It was a typical scalper's market, with the odds in favor of the bear party. The only news from the producing region was to the effect that the McKeown-Martin No 5, in the Washington field, after further drilling, had increased to 170 bbls per hour.

The half-hourly quotations were as follows:

A.M.		P.M.	
10:00	61¼	12:30	60⅝
10:30	61⅛	1:00	60¾
11:00	61	1:30	60⅝
11:30	60⅞	2:00	60⅜
12:00	60⅝	2:30	60⅜
		3:00	60⅜

The clearances were as follows: New York, 3,144,000; Oil City, 604,000; Pittsburg, 564,000; Philadelphia, 229,000; Bradford, 350,000; total clearances July 8, 4,891,000 bbls.

Carrying rates were: New York, 40c; Oil City, 35@40c, Pittsburg, 40c; Bradford, 35@40c.

Market July 8, 1886—65⅛@66⅛c.

Saturday, July 9.

The day began at 60⅜c, as it closed yesterday, and from this there was a drop of one point, and 60¼c was the lowest price of the day. As there was quite a prominent short interest, considering the small transactions of the previous days, the price was run up when some operators attempted to cover, and 60⅞c was reached, though the sales were very light. The close was at 60¾c, showing the advance was well sustained. The close showed a gain of ⅛c for the day under a range of fluctuations of ⅝c. Trading was very tame, the total amount of sales footing up only 180,000 bbls. From the producing regions it was reported that the Markle No. 3 was 30 feet in the sand and producing 200 bbls per day. The Johnson No. 3 was doing 44 bbls per hour. The McTamany No. 1 on the Seifer farm, proved dry. The total production of the Reibold field for the past 24 hours was 5 655 bbls from 74 wells. The total production of the Washington field, where the McKeown Martin No. 5 was doing 138 bbls per hour was 9,588 bbls from 189 wells, two of which had been torpedoed during the week.

The half-hourly quotations were as follows:

A. M.		A. M.	
10.00	60¾	11:00	60⅝
10:30	60⅝	11:30	60⅝
		12:00	60¾

The clearances were as follows: New York, 2,816,000; Oil City, 636,000; Pittsburg, 880,000; Philadelphia, 000,000; Bradford, 398,000; total clearances July 9, 4,780.000 bbls.

Carrying rates were: New York, 40@45c; Oil City, 38@40c; Pittsburg, 40c; Bradford, 40c.

Market July 9, 1886—64¾@65⅝c.

Monday, July 11.

The opening price this morning was 60¾c, and this was also the lowest of the day. After a little skirmishing an advance to 61c was made and later to 61¼c, but trading was mainly at 61c, and the variations from that figure were unfrequent and of only a point. Late in the day there was a little weakening, the market closing as it had opened, at 60¾c, the day's range of fluctuations being spanned by ¼c. This proved without question the dullest and most uneventful day yet experienced on the local exchange, there being not the least feature worthy of note. The total sales footed up only 299,000 bbls. From the Washington field it was reported that the McKeown Martin No. 5 had dropped to 110 bbls per hour. The Hack well at Taylorstown was expected to reach the sand to-day.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	60¾	12:30	61
10:30	61	1:00	61
11:00	61	1:30	61
11:30	61	2:00	61
12:00	61	2:30	60⅞
		3:00	60¾

The clearances were as follows: New York, 738,000; Oil City, 391,000, Pittsburg, 530 000; Philadelphia, 132.000; Bradford, 322,000; total clearances July 11, 2,196,000 bbls.

Carrying rates were: New York, 35@40c; Oil City, 40c; Pittsburg, 40c; Bradford, 40c.

Market July 10, 1886—64⅝@65¼c.

Tuesday, July 12.

The initial figure this morning was 60⅞c and showed a slight gain over the close of last evening To this was soon added a point, and then for a couple of hours the market remained remarkably steady, there being a drop of a point at long intervals only to be quickly regained and up to the last half hour 60⅝c was the lowest point touched, while 61c was the highest price of the day. During the last half hour there was a break to 60½c, the effort to bring the price back to 61c failing, and the day finally closed at 60⅝c, with bids at that figure. For a dull day this takes the cake, the total sales amounting to only 290 000 bbls, nearly all of the scalping order. There was no news of consequence from any source. From the Washington field the McKeown Mar in No. 5 was reported to have again dropped to 110 bbls per hour. The Flack well at Taylorstown was expected to come in this evening.

The half-hourly quotations were as follows:

A. M.		P. M.	
10:00	60⅞	12:30	61
10:30	61	1:00	61
11:00	61	1:30	61
11:30	61	2:00	60⅝
12:00	61	2:30	60⅝
		3:00	60⅝

The clearances were as follows: New York, 1,456,000; Oil City, 300.000; Pittsburg, 580,000; Philadelphia, 174,000; Bradford, 292,000; total clearances July 12, 2,796,000 bbls.

Carrying rates were: New York, 40c; Oil City, 40c; Pittsburg, 40c; Bradford, 35c.

Market July 12, 1886—64⅝@65¼c.

The amount of daily sales and total for the week follow:

Date.	Bbls.
July 6	779,000
" 7	837,000
" 8	670,000
" 9	180,000
" 11	299.000
" 12	290,000
Total for week	3,055.000

Following is given the opening, highest, lowest and closing figures for each day, in tabulated form for comparison:

	Opening.	Highest.	Lowest.	Closing
July 6	60⅜	60⅜	60⅛	60⅜
" 7	60⅝	61⅛	60⅝	61⅛
" 8	61¼	61¼	60¼	60⅝
" 9	60⅜	60⅜	60¼	60¼
" 11	60¾	61¼	60⅜	60¾
" 12	60⅞	61	60⅛	60⅝

The total clearances during the week at the several petroleum exchanges foot up as follows:

New York		11,842,000
Oil City	8 342,000	
Pittsburg	8 916,000	
Philadelphia	*991.000	
Bradford	1,930.000	
		10,181.000
Total		22 023,000

*Five days only; no report Saturday.

The market for refined in barrels for export has shown a marked improvement, the demand continuing fairly active during the entire week under review. The amount of sales reported foot up over 100,000 bbls, which is a gratifying exhibit for this season of the year. The bulk of this goes to Continental ports, and the bulk is for New York loading. The price of 70 deg. Abel test has remained unchanged at 6⅝c for all loadings. From this price no variations are reported though at Philadelphia western lots have been offered at 6¼c. The steady adherence of refiners to 6⅝c, notwithstanding that the speculative price of certificates has ranged very low, has doubtless convinced shippers of the uselessness of longer withholding orders, and we now hear less of expecting a decline to 6¼c, though some still claim the conditions warrant it. Freight rates have been remarkably steady, 2-@2s 6d being the range to Continental ports as to port, and hence to London 3=@3s 1½d as to vessel, are the rates universally quoted. Home trade lots have moved slowly. We being in the dullest season of the year no increase is looked for for some time to come. We quote 8¼@8⅜ for State legal test, 7@7¼c for 110 test 7⅝@ ⅝c for New York City 100 deg. flash, and 8⅛@8¼c for New York City 150 deg. water white. Western lots are obtainable at 6¾@7c for 110 test standard white, 7@7¼c for 120 test standard white, and 8¼@8½c for 150 test water white.

Cases for export were in active demand, principally for New York loading, though some fair sales for Philadelphia loading are also reported. The sales amount to about 300 000. The price has remained unchanged at 8½c for plain tops. Freight rates continue firm for all ports. The rates for large vessels are: For Java, 25@26c; Japan, 23@24c; Calcutta, 17½@18c; Bombay, 19c; Rangoon, 21c, Singapore, 21@22c, and for Shanghai, 27@28c.

Crude for export in barrels has continued to receive attention and sales of about 15,000 bbls are reported. Prices have remained unchanged at 5⅞@6⅛c for Bradford and Parker respectively. Cases have not been in request for export, and no sales are reported. The price has been steady at 7½@8c.

Western naphtha, 68 to 72 deg. is quoted at 7½@8c, delivered free. Crude in bulk is quoted at 5c f o b Prime city is steady at 7¾c but the demand continues light. For export there is a light demand, and only a few moderate sales are reported.

Western residuum, 42@51 degree test, is quoted at 1¼@1¾c f o b. Barrels are quoted at 5@5½c. No sales are reported for export.

Closing Quotations.

CRUDE.

National Transit Certificates, ₱ bbl.	60⅝@	60¾
In bulk ₱ gal.	— @	—
In bbls	8⅞@	4¼
In cases	7¾@	8
Residuum, bbls, for export 18@22°	5½@	6
for domestic use f o b	1¾@	—

REFINED, IN BARRELS.

Cargo lots, ₱ gal, Abel test	6⅝@	—
Philadelphia loading	6¾@	—
Baltimore loading	6¾@	—
5 bbl lots, f. o. b. or on dock	7¾ @	7¾
10 bbl lots, f. o. b. or on dock	8 @	8½

REFINED IN CASES, 110 FIRE TEST.

Two-five, low scale, 10,000 lots	8½@	9
5,000 to 10,000	8⅝@	9¼
1,000 to 5,000	8¾@	9¾
300 to 1,000	9 @	9¼
Under 300	10 @	10½

HIGH TEST OILS—JOBBING LOTS.

110 fire test, S. W	7 @	—
130 fire test, S. W	7¼@	—
150 fire test, W. W	7½@	—
300 fire test	8 @	—
110 fire test W. W	8½@	8¼
150 fire test	10 @	11½
New York city 100 flash		7½
New York city 150 W. W		8¼

NAPHTHA AND GASOLINE.

Naphtha, crude, cargo lots, 68@72 deg	—@	7¾
Naphtha, crude, car lots, 68@72 deg	7¾@	7½
Naphtha, crude, in bulk, f o b	—@	5
Naphtha, crude 70 deg	8½@	9¼
Sweet, 63 deg	8½@	9¼
70 deg	9 @	10
76 deg	9½@	10¾
Gasoline, 86 deg	13 @	14
88 deg	15 @	16
90 deg	18 @	19

EMPTY PETROLEUM BARRELS.

Cargoes spot	$1 05 @	1 06
Domestics, on dock	1 00 @	1 06½
Subject to inspection	$1 06	

Petroleum Statistics.

RUNS—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. July 4	13,739	170,719	42,679
Tues. " 5	57,874	228,591	45,718

Wed. "	6 ... 71,359	209,950	49,992
Thurs. "	7.... 68,644	368,594	52,656
Frid. "	8.... 68,093	454.687	56.836
Sat. Sun. 9	& 10. 78,342	533.029	53,303
January	...1,898,418		61.239
February	...1,673,003		59,772
March	...1,877,333		60.559
April	...1,853 118		61,737
May	...1,886,755		60.563
June	...1,780,343		59,245

DELIVERIES—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. July 4	... 83,915	243 536	60,889
Tues. "	5.... 79,389	322,943	64,588
Wed. "	6.. 70,856	393,799	65,633
Thurs. "	7.... 95,852	489,651	69.950
Frid. "	8.... 49,276	538,937	67,366
Sat. Sun. 9	& 10.119,598	658.535	65,852
January	...2,225,781		71,477
February	...1,879,360		67,120
March	...2,215,656		71.482
April	...1,827,683		60,922
May	...2,150,831		69,382
June	...2,048,486		68,283

CHARTERS—TOTAL AND AVERAGE.

	Day.	Total.	Av'ge
Mon. July 4	... .	62,817	15,704
Tues. "	5.... 24,444	87,261	17,452
Wed. "	6.... 57,142	144,403	24,067
Thurs. "	7.. 49,286	193,689	27,670
Frid. "	8 ... 116,984	310,673	38,834
Sat. Sun. 9	& 10... 10,397	321,070	32,107
January	1,085,312		35,010
February	...881,729		31,491
March	...1,101,075		35,518
April	...1,551,219		51,770
May	...1,519,361		49,013
June	...1,228,638		40,954

CHARTERS FOR THE WEEK.

The total charters for refined in bbls and cases, crude in bbls and cases, naphtha &c., during the week ending July 11, were as follows:

Refined, bbls	135,300
Refined, cs	336,500
Crude, bbls	15,000
Crude, cs	
Naphtha, bbls	8,000
Residuum, bbls	
Lubricating	
Total, crude equivalent	323,014

CLEARANCES FOR THE WEEK.

During the week ending July 11, the clearances of petroleum, in gallons, from the port of New York were as follows:

Refined	5,293,376
Crude	1,146,136
Naphtha	35,371
Residuum	
Total	6,474,883

EXPORT STATISTICS.

The following table shows the exports from the port of New York and the exports from the United States, in gallons, for the week ending July 2. It also shows the total shipments for the year to date, with comparisons with 1886:

Exports in crude equivalent from New York for week ending July 2..	14,895,394
Total exports in c. e. from New York from Jan 1, 1887	229,507.240
Same period last year	252,850,279
Decrease	23,343,039
Exports in c. e. from U. S. for week ending July 2	14,895,394
Total exports in c. e. from U. S. from Jan 1, 1887	300,616,376
Same period last year	349,272,529
Decrease	48,656,153

TOTAL EXPORTS FROM DIFFERENT PORTS.

	1887.	1886.
New York	229,507,240	252,850,279
Philadelphia	68,454,108	88,973,891
Baltimore	2,655,028	6,554,766
Boston		893,793
Grand total	300,616.376	349,272,529

CAPACITY OF VESSELS LOADING.

The following table gives the capacity of the vessels loading petroleum at the ports of New York, Philadelphia, Baltimore and Boston on July 11:

	NEW YORK. Bbls.	Cases.	PHILADELPHIA. Bbls	Cases.
Refined	185,600	562,000	97,800	406,500
Crude	21,500	....	10,000	....
Naphtha	9,000	...	14.000	. .
Total	216,100	562,000	121.800	406,500

	BALTIMORE. Bbls.	Cases.	BOSTON. Bbls.	Cases.
Refined	21,000	....	....	21,000
Crude	....	.. .	....	....
Naphtha	....	....	...	....
Total	21,000	....	. ..	21,000

Foreign Statistics.

REFINED QUOTATIONS

	Bremen	Antwerp.	London.
Wed, July 6.	6.00	15 @	5¼@5⅜
Thur, " 7.	6.00	15 @	5¼@5⅜
Fri, " 8.	6.00	15 @	5¼@5⅜
Sat, " 9.	6.00	15 @—	5¼@5⅜
Mon, " 11.	6.00	15 @—	5¼@5⅜
Tues, " 12.	6.00	15 @—	5¼@5⅜

STOCKS, RECEIPTS AND SHIPMENTS.

The stock at the seven principal continental ports on June 25, was:

	1887.	1886.
Stock, June 25	400,413	707,375
Afloat "	424,259	173,786
Loading "	242,600	265,600
Total	1,067,272	1,146,761
Receipts June 18 to June 25..	16,186	57,851
Rc'ts July 1,'86 to June 25,'87.	3,611,548	3,629,380
Shipments June 18 to June 25.	26,192	43,461
Shp's July 1,'86, to June 25,'87.	3,946,056	3,843,022

At London the stock on the same date was

	1887.	1886.
Stock, June 25	82,680	151,527
Afloat "	95,199	37,164
Loading "	42,300	11,500
Total	220,179	200,191
Receipts June 18 to June 25. ..	6,000	39.211
Rec's July 1, '86, to June 25,'87.	612,312	709,835
Shipments June 18 to June 25..	3,888	5,973
Shp'ts July 1,'86, to June 25,'87	719,180	670,338

Petroleum Charters.

Following is a list of vessels chartered and oading or to load petroleum at New York, Philadelphia, Baltimore and Boston.

NEW YORK	Bbls. Refd
Jan 24	
Nor sh Plantagenet, London, Antwerp or Bremen, p t	3,000
March 25	
It bk Conquistatore, Algiers, p t....cs	20,000
April	
Br bk Alice Cooper, Rouen, 2s 3d....cde	5,500
April 21	
Br str Irthington, Palermo or Messina, 15c....cs	70,000
April 26	
It bk Maria Stella, Montevideo, f o, 22c.cs	16,000
May 6	
Nor bk Fortuna, Baltic, 2s 4½d	2,500
Nor bk Marie, U K or Cont, pt	4,000
May 16	
Br bk Scots Bay, Bristol, 1s 7½d	6,000
Br sh Oithona, Java, pt....cs	50,000
May 18	
Dan bg Arken, Paranagua, pt....cs	6,500
May 25	
Dutch sh Utrecht, Dutch port, pt	12,000
May 31	
Br sh Treasurer, U K or Cont. 2s	8,000
Rr sh Cumberland, London, 2s	10,000
June 1	
Br sh Morning Light, Java, 21@22c....cs	45,000
Ger bk Johann Wilhelm, Baltic, 2s 1½d	5,000
Nor bk Ragnhuld, Swedish port, p t, nap 2,000	1.000
June 3	
Br bk Lizzie Perry, Hamburg, 2s	8,000
Br sh Vandalia, U K, 2s 3d	8,000
Br sh Walter H Wilson, Calcutta, 16c..cs	90,000
June 9	
Ger bk Charlotta Lange, Baltic, p t	2,500
June 11	
Ger sh Andromeda, Bremen, o's acc. bulk	13,000
June 13	
Am sh Grandee, Japan, 23c....cs	45,000
It bk Maria Teresa, Java, pt....cs	30,000
June 15	
Nor bk Ringhorne, Ger Baltic, pt	5,500
Nor bk Asta, Swedish port, 2s 4½d	3,000
June 16	
Br bk Latona, Baltic, pt	6,000
Br sh Karoo, Antwerp or London, pt	12,500
June 17	
Am sh A McCallum, Ant'p or Bremen, 2s.	11,500
June 22	
It bk Fillippo, Montevideo, 21c....cs.	17.000
June 23	
Ger bk Bremen, Baltic, 2s 3¾d	6,000
Br sh Minister of Marine, Shanghae, 36c.cs	60,000
Nor bk Columbo, Ger Baltic, 2s 4½d	3,500
June 24	
Nor bk Natvig, Flensborg, 2s 5d	3,000
June 28	
Am sh Robert Dixon, Havre, 2s 2¼d.cde	8,000
Br bk Josie Troop, Japan, 23c....cs	40,000
June 29	
Am sh Eclipse, Shanghae, 26c....cs	55,000
Nor sh Race Horse, Stettin, 2s 4½d	6.000
Br bk Conductor, Stettin, 2s 4½	6,500
It bk Guiseppe d'Abundo, Barcelona, pt ...cde	3,500
June 30	
Br sh Barbadian, Java, pt....cs	26,000
Nor bk Cromwell, Blaye, 2s 4½d....nap	6,000
Nor bk Marie, Stettin, 2s 4½d	4,400
Ger bk Wm Bateman, Ger Baltic, 2s 4½d.	3,000
Swed bg Johan, Swedish port, 2s 6d	1,300
Nor bk Passat, Ger Baltic, 2s 4½d	4.000
Nor bk Saga, Ger Baltic, 2s 4½d	2,800
Am bk Wm W Crapo, Japan, pt....cs	65,000
July 1	
Ger sh August, Hamburg, 2s	9,500
Br bk Fitzroy, Ger Baltic, 2s 4½d	3,600
Br bk Arcadia, Belfast, 2s 2½d	4.500
Ger bg Doctor Witts, Drammen, 2s 6d	1,700
July 5	
Aus brg Stillicome, Port Said, 13c....cs	16,000
July 6	
Nor bk J P Berg, Exmouth, 2s 4½d...nap	3,000
Br ship Stalwart, Java, p t....cs	55,000
Br ship Erin's Gem, Liverpool, Bristol or Cardiff, 2s 1½d	9,500
Nor bk Gustav Adolph, Java, p t....cs	25,000
Br bk Mauna Loa, Rotterdam, 2s	6,500
Aus bk Cibele, Alexandria, 13¾c....cs	20,000
July 7	
Br bk Minnie Brown, Belfast, 2s 1½d	6,000
July 8	
Am bk Inveresk, London, 2s 1½d....nap	5,000
Am sh Everham Abbey, Calcutta, p t....cs	60,000
It bk Maria Parodi, Alexandria, 13c .. cs	30,000
It bk Fratelli Branchi, Alicante, 12½c & 2s 6d, cs 15,000 &	1,000
Br bk Calliope, U K or Cont, p t	7,300
Nor bk Granger Rolf, Horitz, 2s 4½d	2,500
Am sh E W Stetson, Dutch port, 2s	7,000
Br sh Coringa, Dutch port, p t	8,000
July 9	
Nor bk Marie, Ger Baltic, 2s 4½d	2,800

Exports of Petroleum from New York.

REFINED.

COUNTRIES.	FOR THE PAST 6 DAYS. Gals.	PREVIOUSLY 1887. Gals.	SAME TIME 1886. Gals.
Africa, Liberia	10,560	5,380	
Sierre Leone			
South Africa		917,134	62,440
Zanzibar		300,000	
Algiers		595,870	329,260
Arabia		1,150,000	
Argentine Republic	59,000	1,831,860	1,133,136
Australia		2,069,931	1,855,066
Austria			90,900
Belgium		15,026,534	12,591,206
Brazil	150,680	3,184,934	4,070,340
British East Indies, Aden		250,000	
Burmah		1,737,850	
India		11,951,130	24,678,020
Penang			
Singapore		1,676,760	
British Guiana	3,100	351,271	121,360
British West Indies, Antigua		21,600	
Barbadoes	11,000	109.870	
Basse Terre	14,500	88,544	
Bermuda		58,485	
Domenica		19,590	
Jamaica	11,152	292,480	
Montserrat		1,600	907,227
Nassau	372	30,435	
St. Lucia		8,502	
St. Vincent		25,745	
Trinidad	8,700	140,531	
All others	2,500	13,424	
Canary Islands		65,540	124,570
Central America, Belize		35,985	
Costa Rica	3,001	23,783	
Guatamala		41,333	
Honduras		20,651	156,054
Nicaragua	6,466	118,238	
San Salvador	1,136	36,900	
Chili		928,165	563,576
China, Cochin		1,300,548	23,251,280
All other		8,404,128	
Cuba	4,100	387,938	351,850
Danish West Indies	250	28,805	120,923
Denmark		3,042,991	3,019,773
Dutch East Indies, Java	571,000	9,547,230	
Macassar		256,000	10,792,183
Sumatra		330,000	
Dutch West Indies	50	50,429	52,888
Dutch Guiana	10,200	10,200	500
Equador		73,220	95,000
England	436,802	24,049.041	21,363,144
Egypt	412,500	1,723 380	943,340
France		1,318,399	320,155
French Guiana		9,970	7,750
French West Indies	5,500	205,355	203,772
Germany	745,319	37,432,628	27,431,202
Gibraltar		517,419	1,606,130
Greece	30,000	60,000	
Hawaiian Islands		39,640	
Hayti Island, Hayti	1,300	121,183	259,098
San Domingo	13,150	193,454	
Ireland	816,768	1,487,672	1,048,203
Italy	152,013	1,051,638	552,645
Japan	561,530	6,114,820	5,061,900
Mexico	1,250	606,109	403,401
Malta		475,000	
Mauritius Island			
Netherlands	433,310	19,381,901	17,760,976
North America, New Brunswick		247,199	
New Foundland	2,524	108.414	19,668,965
Nova Scotia	2,000	90,951	
Prince Ed. Island		40,500	
Norway and Sweden	644,266	3,609,952	2,705,330
Peru		81.896	371.921
Porto Rico		332,205	271,172
Phillippine Islands		222,640	263.900
Portugal		397,080	208,852
Reunion		72.030	159,430
Russia		95,874	93,972
Scotland			
Siam		530.680	608.820
Spain	100,200	382.190	378.549
Turkey	60,000	942.584	1,301,970
U. S. of Col.	5,821	331,251	256.047
Uruguay	1,250	1,762.710	1,227,291
Venezuela	100	480,943	363.244
Total	5,293,376	171,596,743	170,708 919

CRUDE.

COUNTRIES.	FOR THE PAST 6 DAYS. Gals.	PREVIOUSLY. 1887. Gals	SAME TIME 1886. Gals.
Australia			
Austria			
Belgium			
Brazil			
Chili		10,000	
British West Indies			244.084
Cuba	633,000	2,455,361	1,616 353
Danish West Indies			1,064
Dutch West Indies			297,650
England		213,217	
France	513,136	7,634,174	9,348,535
Germany		1,084 659	433,500
Hawaiian Islands		2,525	
Mexico		451,080	
British North America			
Norway & Sweden			306,121
Spain		4,654,527	5,390,096
Total	1,146,136	16,515,545	18,667,403

NAPHTHA.

COUNTRIES.	FOR THE PAST 6 DAYS. Gals.	PREVIOUSLY. 1887. Gals.	SAME TIME 1886. Gals.
Africa		96	
Algiers		5,000	
Argentine Republic			475
Australia			1,300
Belgium		184,500	138 000
Brazil		101,831	30,400
British West Indies		198	330
Central America			
Denmark			
England		1,899,710	997,924
France		602,073	209,110
Germany			122,465
Hayti		10	18
Ireland		5,118	
Mexico			50
British North America		1,800	2,100
Norway and Sweden	35,371	306,869	180,051
Portugal		475	
Russia			11,615
Venezuela		19,000	15,000
Total	35,371	3,126,679	1,706,888

Ger bk Betty, Cette, 2s 6d.....cde 5,000

July 11

Am sh Geo Skolfield, Calcutta, 18½c....cs 48,000
Ger bk Matthias, Hamburg, 2s 7,000
Ger bk Adolph, Hamburg, 2s..... 6,500
Br bk Etta Steuart, Galway, pt..... 4,500
It bk Luigino Guido, Levant, 13c.....cs 16,000
It bg Francesca, Levant, 14c.....cs 11,000

PHILADELPHIA

Feb 26

Am bk Importer, Japan, 26c.....cs 48,000

March 14

Am sh Francis, Japan, pt .....cs 75,000

April 7

Am sh Farragut, Bombay, 21c.....cs 55,000

April 13

It bk I Dui Fratelli. wc Italy, pt.....cs 20,000

April 16

Nor bk Golden Horn, Cont, pt..... 7,000

April 19

It bk Entella, Genoa, pt... .....cs 24,000

April 26

It bk Genitori, Rouen, 2s 1½d.....cde 4,500

May 4

It bk Confidenza, Adriatic, pt.....cs 18,000

May 7

us bk Giusto, Solonica or Constantinople, pt.....cs 28,000
Nor bk Mayo, Plymouth or Exmouth, 2s 1½d..... 2,500

May 9

Nor bk Aurania, U K or Cont, pt..... 8,000

May 11

Ger sh Palme, U K or Cont, p t. 6,500
Ger sh Amelia, Stettin or Danzig, p t..... 6,000

May 21

It bk Degregore A, Singapore and Penang, 20 and 21c.....cs 30,000

May 24

Nor bk Einar, French port, p t.....cde 6,000

May 25

Nor bk Farna, Rouen or St Loubes, 2s.cde 6,000

May 26

Nor bk Maitland, Baltic, 2s..... 4,500

June 1

Am bk Samuel D Carleton, Penang or Singapore, 20 or 21c.....cs 27,000

June 7

Swed sh Star of England, U K or Cont... 9,000

June 10

Nor bk Ruth, Baltic, pt. 3,000
Am bk Xenia, Japan, 23c.....cs 40,000

June 11

Nor bk Alexandra, Cont, 2s 1½d..... 6,000
Nor bk Rock City, Ger Baltic, 2s 3d..... 5,000
Nor bk Italia, U K or Cont, pt..... 5,000

June 13

Ger sh Favorita, Hamburg, pt 10,000
Ger sh Helene, Bremen, 2s 3d.... ...cde 7,500

June 15

Br bk Annat Lyle, Havre, 2s 6d.....nap 8,000

June 17

Nor bk Aldora, Havre, 2s 4½d.....cde 7,000

June 20

It bk Ottone Padre, Mediterranean, pt.cs 25,000

June 23

Ger bk Elvira, Hamburg or Bremen, 2s.. 8,500

June 24

Br bk Christina, Java, 21½@23½c.....cs 38,000
Br sh Lock Broom, Japan, 22½c.....cs 75,000

June 27

Nor bk Glengairn, Continent, pt..... 5,000
Nor bk Inga, Bremen, 2s 4½d.....nap 6,000
Nor bk Sigrid, Hull, 2s 2¼d 7,500
Am sh Henry Failing, Liverpool, 2s..... 12,000

June 30

Nor bk Italia, Ger Baltic, p t..... 5,000

July 1

It bk Principi di Napoli, Genoa, 11c ..cs. 40,000
It bk Caterina Madre, Dunkirk, 2s 3d.cde 5,700

July 5

It bk Fratellaroza, Java, 25@26c.....cs 28,500
Ger bk Laura & Gertrude, Cont or Baltic, p t 6,500

July 6

Am sh Lucy A Nichels, Java, p t.....cs 50,000

July 7

Nor bk Artemus, Flensborg, p t. 3,500
Ger bk Louisa & Augusta, Hamburg, 2s. 7,500
Ger sh Fidelia, U K or Cont, p t..... 8,000
It bk Carrara, Valencia, 13c & 3s.cs 12,000& 1,000
Ger str Hafis, Hamburg, o's acc.....bulk 13,000

July 8

Ger sh Derby, Hamburg or Bremen, pt.. 6,800
Am sh M Nottebohm, Dutch port, 2s..... 7,000
Ger sh Fritz, Bremen, 2s 1½d .....cde 10,000

July 11

Ger sh Carl, Hamburg, 2s..... 7,800

BALTIMORE.

May 19

Br bk Osberga, Continent, p t..... 7,500

May 20

Ger sh Baltimore, Bremen or Hamburg, 1s 7½d..... 7,000

May 25

Nor bk Saga, Baltic, 2s 1d..... 3,500

June 18

Am sh Macaulay, Bremen or Hamburg, o,s acc..... 7,000

June 21

Br bk Chas E Lefurgey, Hamburg, pt.... 6,000

July 1

Ger sh Stella, Bremen or Hamburg, p t.. 8,000

BOSTON

May 21

It bk Laura, Naples, 11¾c.....cs 16,000

June 20

Aus bk Tilde, Smyrna, 14c..... .....cs 21,000

PERTH AMBOY

July 8

It bk Cattolica, Belfast, 2s..... 5,700

Clearances of Petroleum.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified—

NEW YORK

July 5

Am sch M M Dyer Bluefields, 300 cs
Am bk Cardenas, Monrovia, 1042 cs
Am bk Cardenas, Gaboon, 10 cs
Am bk Carder as, Cape Palmas 4 cs
Br bk T E Marshall, London, 7390 bbls
Aust bk Vila, Alexandria, 16000 cs
Aust bk Vila, Cyprus, 6000 cs
Aust bk Vila, Greece, 3000 cs
It bk E Mainetto, Batavia, 34500 cs
It bk San Luigi, Gibraltar, 7000 cs
Nor bk Aristos, Sligo, 3127 bbls
Ger bk M Siedenburg, Hamburg, 7283 bbls

July 6

Am bk America, Bridgetown, 600 cs
Am bk St James, Yokohama, 56153 cs
Am sch N Shipman, Pto Plata 1250 cs
Br str Alene, Savanilla, 2cs
Br str Alene, Kingston, 1 cs
Br str Claribel, Port Limon, 290 cs & 2 bbls
It bk Italia, Pozzuoli, 2921 bbls
Sp str B Yglesias, Havana, 500 cs
Sp str B Yglesias, Vera Cruz, 50 cs
Nor bk Asta, Norrkoping, 2220 cs bbls

July 7

Am str Valencia, La Guayra, 10 cs
Am str Valencia, Curacoa, 5 cs
Am str Allianca, Pernambuco, 4 bbls
Am str City of Para, Panama, 30 cs
Am str City of Para, Colon, 15 cs
Am str City of Para, Corinto, 75 cs
Am bk Cameo, Port Spain, 370 cs
Am bk Julia, Cork, 4393 bbls
Br bk Rosina, St Johns N F, 50 bbls
Br bk Paramatta, Blaye, 5821 bbls, cde
Br bk Violet, Waterford, 5114 bbls
Br bk J H McLaren, Rio de Janeiro, 15000 cs
Br bg Adria, Halifax N S, 200 cs
Br str Barracouta, St Kitts. 1675 cs
Br str Barracouta, Genada. 250 cs
Br str Barracouta, St Croix, 25 cs
Nor bk Sichem, Gothenburg, 2169 bbls ref and 700 bbls naphtha

July 8

Br str Maranhense, Pernambuco, 50 cs
Br str E Godden, Kingston, 1 bbl
Br bk John Johnson, Rosario, 2000 cs
Sw bk Johann, Setea, 1149 bbls

July 9

Am bg Rising Sun, Bridgetown, 500 cs
Am sch J R Bergen, Havana, 2100 bbls cde
Am bk Shetland, Buenos Ayres, 3300 cs
Br bk Elcho, Georgetown, 310 cs
Br bk Zenobia, Exeter, 1101 bbls
Br bk N B Morris, Cette, 4394 bbls cde
Br str Thames, Martinique, 550 cs
Br str Pomona, Montega Bay, 500 cs
Br bg A Bradshaw, Pt au Prince, 130 cs
It bk C Madre, Batavia, 22600 cs
It bk N Margherita, Gibraltar, 3000 cs
It bk N Margherita, Cadiz, 20 cs
Aust bk Libero, Alexandria, 25250 cs
Nor bk Runer, Montevideo, 125 cs
Dch bg Eva, Surinam, 1020 cs

July 11

Am bg Daylight, Port Spain, 500 cs
Am str Ozama, Samana, 25 cs
Am str Ozama, Pto Plata, 40 cs
Am str Colon, Colon, 5 cs
Am str Colon, Acajutla, 113 cs
Br sh E J Spicer, Rotterdam, 8491 bbls
Br sch H Darling, Nassau, 7 cs
Br sch Victory, Nassau, 15 cs, 3 bbls
Br bg J Balcom, Colastine, 600 cs
Br str Thornhill, Progreso, 75 cs
Br str Alene, Kingston, 450 cs, 13 bbls
Br str Alene, Carthagena, 369 cs
Br str Alene, Savanilla, 125 cs, 7 bbls
Br str Alene, St Ann's Bay, 200 cs
Br str Alene, Port Antonio, 1 cs
Br str Alene, Greytown, 120 cs, 115 pgs, 5 bbls
Nor bk Alf, Belfast, 3341 bbls
Sw bk Engelbrecht, Stockholm, 4025 bbls
Sw bk Berna, Maimoe, 2274 bbls
Ger bk Elizabeth, Hamburg, 7422 bbls

SAN FRANCISCO

June 23

Ella, Honolulu, 5 bbls

PHILADELPHIA

July 2

Br bk Nansika, Dublin, 3300 bbls
Dch bk Jan Pieterskreukoen, Stettin, 4430 bbls
Nor bk Deodata, Dunkirk, 2801 bbls
Ger sh Hermann, Antwerp, 11175 bbls

July 5

Br bk Talisman, Dunkirk, 6073 bbls cde
It bk N S Del S Cuose di Gesu, Venice, 21917 cs

July 8

Ger sh Elida, Liverpool, 8140 bbls

BOSTON.

July 5

Sch Edward, Sackville, 25 bbls

July 6

Sch King Philip, Frederickton, 1 bbl
Str Nithsdale, Sierra Leone, 4000 cs

Imports of Empty Barrels.

NEW YORK.

6863, Gust Heye, Coringa, Antwerp
9905, Gust Heye, J Weissenhorn, Bremen
7335, order, Bristol, Antwerp
4848, Gust Heye, C Edela, Pilian
5778, Gust Heye, Earl Burgess, London
5505, Gust Heye, Avonmore, Rotterdam
2000, Gust Heye, Rialto, Newcastle
9450, Gust Heye, R R Thomas, Hull

PHILADELPHIA.

8900, order, J Melchers, Fiume
5081, order, Derby, Hamburg
5742, order, Laura & Gertrude, Fiume
3773, order, Roska, Antwerp
2630, order, Rapide, Liverpool
2460, E P Cooper, Atlantic, Stettin
1883, order, Mattia, Liverpool
4810, order, Fidelio, Hamburg

Summaries of the Pipe Line Statements for June.

We are enabled to present the official reports of the different pipe line companies. Below will be found a statement of the total deliveries from each line in the months of May and June, 1887:

	May.	June.
Tidewater Pipe Co..	222,821 19	217,690 05
Octave Oil Co.....	3,270 00	2,593,21
Keystone Pipe Line. ..	34,006 36	35,724 39
National Transit 1,880,588 58		1,760,679 00
Pittsburg Pipe Line.....	111,383 25	112,007 21
Macksburg Pipe Line...	16,002 16	17,384 14
Southwestern Pa. P L..	81,338 63	45,070 69
Total shipments....	2,229,455 16	2,181,148 71

COMPARATIVE STATEMENT OF SHIPMENTS.

The following is a comparative statement of the deliveries during each month in the years 1884, 1885, 1886 and 1887:

	1884.	1885.	1886.	1887.
January ...1,686,621	1,836,138	2,051,680	2,301,272	
February..1,723,260	1,910,045	2,032,794	1,993,126	
March.....1,873,890	1,891,792	2,055,730	2,312,209	
April.....1,643,336	1,842,800	2,097,404	1,949,459	
May.....1,899,330	2,097,419	2,027,460	2,289,455	
June.....1,977,501	2,034,025	2,165,688	2,181,149	
July 1,872,819	2,130,087	2,246,488	.....	
August....2,101,627	2,049,099	2,289,716	.....	
September.2,293,247	2,136,175	2,378,502	.....	
October.. .2,515,466	2,075,259	2,433,501	.....	
November.2,034,746	1,895,011	2,712,364	.....	
December..2,382,059	2,188,254	2,542,389	.....	
Total....24,154,002	24,086,104	27,013,716	.....	

The following exhibits the stock held by each of the pipe line companies at the close of June, together with the gross receipts from all sources during the month:

	Stocks.	Receipts.
Tidewater Pipe Co	1,561,836 52	176,089 25
Octave Oil Co	3,235 13	2,469 28
Keystone Pipe Line....	36,771 38	35,350 72
National Transit.....28,731,647 70		1,314,078 29
Pittsburg Pipe Line....	3,741 93	111,278 14
Macksburg Pipe Line...	465,363 45	29,586 04
Southwestern Pa. P L..	1,122,231 67	263,134 15
Total.....	31,924,827 78	1,931,985 87

The following table exhibits the stock held by all pipe lines at the close of each month during the last four years:

	1884 Stock	1885 Stock	1886 Stock	1887 Stock
Jan....	35,834,930	36,693,111	33,608,364	32,574,989
Feb....	36,041,914	36,316,806	33,180,057	32,473,612
March..	36,206,626	36,067,905	33,053,140	32,232,310
April...	37,726,877	36,021,746	32,946,618	32,358,442
May....	38,475,528	35,460,127	33,059,909	32,077,638
June...	38,665,848	35,103,278	23,305,775	31,924,828
July....	38,986,248	34,887,330	33,462,230	.....
Aug.. .	39,083,464	34,496,800	33,833,632	.....
Sept....	38,740,722	34,087,938	34,081,064	.....
Oct	38,123,745	33,903,544	34,031,462	.....
Nov....	37,857,193	33,794,358	33,733,796	.....
Dec ...	36,872,892	33,539,038	33,387,098	.....

AVERAGE DAILY RUNS.

The following exhibits the average daily runs in each month in 1884. 1885, 1886 and 1887:

	1884	1885	1886	1887
January.....	58,913	53,298	58,186	63,827
February.....	67,078	54,997	57,741	64,392
March.....	66,303	54,089	62,555	65,012
April.....	65,814	60,290	66,366	66,065
May....	66,713	57,141	70,670	65,509
June.....	67,357	59,907	79,545	64,399
July.....	66,201	57,299	78,935	....
August.....	66,492	54,778	85,502	....
September	66,059	58,718	79,630	....
October.....	63,071	63,122	77,533	....
November ...	61,758	60,903	72,146	....
December	61,749	63,270	69,166	....

Summary of report of National Transit Company at close of business June 30, 1887:

Gross stocks.....		32,884,448 83
Sediment and surplus.....		4,152,801 13
Acceptances, etc.....21,697,096 33		
Credit balances..... 7,034,611 37		
Total liabilities... ....28,731,647 70		

RECEIPTS FOR JUNE.

Runs from wells.... ....1,314,078 29	
Rec'd from other lines. 374,706 86	
Rec'd in iron tanks	
	1,688,785 15

SHIPMENTS.

Regular shipments.....1,760,679 00	
Delivered to other lines.. 37,331 53	
Total deliveries in March.....	1,798,010 53

Summary of report of Tidewater Pipe Company at close of business June 30, 1887:

Gross stocks.....		1,736,551 28
Sediment and surplus.....		174,714 76
Acceptances, etc..... 881,000 00		
Credit balances 680,836 52		
Total liabilities.....		1,561,836 52

RECEIPTS.

Receipts for June, from wells.....	176,089 25
Receipts for June, from other lines..	37,341

TOTAL DELIVERIES FOR MAY.

To refineries...	217,690 05
To other parties..... ...	000,000 00
Total.....	217,690 05

The following table exhibits the amount of oil in the National Transit represented by outstanding certificates and other vouchers at the close of each month in 1885, 1886 and 1887:

OUTSTANDING CERTIFICATES.

	1885.	1886.	1887.
Jan 31....27,626,592 54	27,567,041 53	22,566 039 08	
Feb 29....26.894,042 14	26,694,037 53	22,401,039 08	
Mar 31....27,417.675 12	26,686,037 58	22.472,039 08	
Apr 30....27,474,098 56	25,679,037 53	22,428.036 33	
May 31....26,864,600 44	25.570,037 53	22,091.036 33	
June 30.. 27,793,381 72	24,889,259 78	21,997,036 33	
July 31...27,562,638 85	25,241,961 38	.....	
Aug 31...27,371,587 22	24,982,510 58	.....	
Sept 30...27,750,469 23	25,110,087 78	.....	
Oct 31... 28,270,229 17	24,836,576 08	.....	
Nov 30...28,191,509 88	23,984,801 48	.....	
Dec 31...27,838,095 06	23,881,037 98	.....	

The following tables, exhibiting the condition of the Franklin and Buckeye lines at the close of June are entirely independent of other pipe line reports and are not counted in the stocks and averages noted above. These lines represent different oils, that of the Franklin being heavy and that of the Buckeye Lima oil:

FRANKLIN PIPE CO.

	Runs.	Shipments.	Stocks.
May.	5,693 71	5,111 26	22,896 75
June.....	6,988 19	1,674 28	28,210 67

Average June runs 233; average shipments 56.

BUCKEYE PIPE LINE CO.

Credit balances....		2,111,037 13
Total liabilities..		2,111,037 13
Gross stocks... ... .3,183,079 94		
Sediment, etc....	72,042 81	
Net stocks		2,111,037 13
Receipts.		474,535 17
Deliveries..		104,440 19

Average June runs 15,818; average shipments for June, 3,481. Increase of stock, 370,094 98.

Statement made June 10, 1887, relating to business of various Pipe Lines for May, 1887.

	Total Liabilities.	Gross Stocks.	Sediment & Surplus.	Receipts.	Regular Deliveries.	Other Deliveries	Regular Deliveries.	Other Deliveries
National Transit Co....	28,846,105 22	32,880,159 25	4,043,054 03	1,376,834 91	1,256,588 58	155,295 21	1,760,679 00	37,331 53
Southwest Pa. P. Lines....	1,164,366, 48	1,221,350 64	56,571 16	267,9 0 38	214,666 51	274,666 51	43,070 69	290,330 27
The Macksburg Pipe Line Company..	453,161 52	460,366 77	27,224 22	30,601 31	16,002 16	.....	17,384 14	.....
	30,464,255 25	34,560,904, 66	4,126,849 41	1,705,355 65	1,487,257 25	429,911 72	1,821,133 83	298,151 79

Statement made July 9, 1887, relating to business of various Pipe Lines for June, 1887.

	Total Liabilities.	Gross Stocks.	Sediment & Surplus.	Runs from wells.	Regular Deliveries.	Other Deliveries	Regular Deliveries.	Other Deliveries
National Transit Co....	28,731,647 70	32,884,448 83	4,152 801 13	1,314,078 29	1,760,679 00	37,331 53	1,798,010 53	176,089 25
Southwest Pa. P. Lines....	1,122,231 67	1,161,699 06	82,467 39	263,134 15	43,070 69	.....	.....	.....
The Macksburg Pipe Line Company..	465,368 45	494,106 53	29,743 08	28,986 01	17,384 14	.....	.....	.....
	30,319,247 82	34,540,254 42	4,244,011 60	1,606,198 45	1,821,133 83	37,331 53	1,798,010 53	176,089 25
Increase.....			117,162 19		333,999 83			
Decrease.....		145,012 43	27,650	98,567 17		139,580 19		

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95 "	EXTRA REFINED,	"	1.25	"
92 "	REFINED,	"	1.20	"

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IMPORTS, EXPORTS, DOMESTIC RECEIPTS, Etc

IMPORTS ENTERED AT NEW YORK FOR CONSUMPTION,

DURING THE WEEK ENDING JULY 9.

ACID—17 cs, 1650 D, Schering & G, Hammonia, Hamburg
CARB—10 cs, Lazell, D & Co, Umbria, Liverpool
2 dms, 220 D, Stallman & F, Rotterdam, London
10 cks, 1120 D, A Bulow & Co, Britannic, L'pool
GALLIC—1 cs, 1650 D, Schering & G, Hammonia, Hamburg
SALYCYLIC—12 pgs, 1200 D, Schulz-Berge & K, Rhyniand, Antwerp
ALBUMEN LIQUID—1 ck, Aug Loos & Co, Umbria, L'pool
ALIZARINE—150 cks, 613.0 D, W Pickhardt & K, Rhyniand, Ant'p
BROWN—4 cks, 300 D, Lutz & M, Trave, Bremen
1 cs, 220 D, Lutz & Movius, Ems, B'n
ALOES ESSENCE—1 bx, 66 D, M Straus, C of Alexandria, V C'z
ALUMINA SULPH 2 cks, 661 D, E H Watson, Schiedam, R'dam
ANILINE COLORS—3 cks, 938 D, Read, Holliday & Son, Nevada, Liverpool
2 cks, 600 D, Alpers & Mott, Umbria, L'p'l
7 cks, C Georgi, Ems, Bremen
24 pgs, 3300 D, Schulze Berge & K, Ems, Bremen
3 cs, Geisenheimer & Co, Elder, Bremen
1 cs, R Meyer & C, Elder, Bremen
5 bbls, 2200 D, A Klipstein, Rhyniand, Antwerp
11 pgs, 4650 D, A Klipstein, Rhyniand, Antwerp
1 pg, Banning, B & Co, Sorrento, Hamburg
13 pgs, 1900 D, Lutz & M, Trave, Bremen
2 pgs, 200 D, E Schibach & Co. Trave, Bremen
3 pgs, 440 D, Banning, B & Co, Trave, Bremen
10 pgs, 900 D, Schulze-Berge & K, Trave, Bremen
10 pgs, W Pickhardt & K, Trave, Bremen
1 pg, 220 D, Banning, B & Co, Rotterdam, R'dam
52 pgs, C Georgi, Rhyniand, Antwerp
100 D, W J Matheson & Co, Holland, London
1 cs, 100 D, Lutz & M, Elder, Bremen
5 cks, Schulze-Berge & K, Rhyniand, Antwerp
DYES—4 pgs, Geisenheimer & Co, Elder, Bremen
18 pgs, 2100 D, Lutz & Movius, Hammonia, H'b'g
4 cs, 420 D, Geisenheimer & Co. Ems, Bremen
4 cks, 500 D, Lutz & Movius, Ems, Bremen
7 pgs, Banning B & Co, Schiedam, R'dam
SALTS—50 cks, W J Matheson & Co, Holland, London
ANTIMONY REG—8 cks, 7300 D, Stallman & F, Helvetia, L'don
ARCHIL—10 cks, 6414 D, Read Holliday & Sons, Nevada, L'pool
ARGOLS—266 bgs, 76264 D, N Y Tartar Co, La Gasgogne, Havre
48 cks, 45393 D, N Y Tartar Co, Adriatic, Liverpool
46 cks, 48114 D, Loeb Bros, Assyria, Leghorn
231 bgs, 50210 D, C Pfizer & Co, Assyria, Bari
ASPHALTUM—56 bgs, 8600 D, H A Forrest & Co, C of Alexandria, Vera Cruz
ATTAR OF ROSE—1 cs, 500 ozs, A Giese, Umbria, Liverpool
BALSAM COPAIBA—24 cs, 4123 D, G Amsinck & Co, Valencia, Pto Cabello
TOLU—8 bxs, 600 D, D A DeLima & Co, Ailsa, S'nil'a
5 cxs, 236 D, S Samper & Co, Ailsa, Savanilla
BARIUM OXIDE—1 cs, Rogers & Pyatt, Elder, Bremen
PEROXIDE—10 cs, Rogers & Pyatt, Elder, Bremen
BARK CASCARILLA—12 bls, 2100 D, A Isaacs & Co, Santiago, N'u
BARYTES—96 cks, 84040 D, Gabriel & S, J Weisenhorn, Bremen
CRUDE—1100000 D, Gabriel & S, J Weisenhorn, Bremen
BLEACH—100 cks, 32087 D, G A & E Meyer, Crystal, Newcastle
91 cks, 111123 D, Wing & Evans, Egypt, Liverpool
51 cks, 55174 D, Innis & Co, C of Chicago, Liverpool
BORAX—10 cs, 1120 D, J & H Berge, C of Chester, Liverpool
BRIGHT RED—7 cks, 6806 D, G A & E Meyer, Santiago, Hull
BRIMSTONE—300 tons, J L Morgan & Co, Italia, Catania
BRONZE POWDER—3 cs, S T Levy Ems, Bremen
5 cs, Sondheim, A & Co, Elder, Bremen
2 cs, A Smith & Sons, Ems, Bremen
6 cs, Jay C Wemple & Co, Ems, Bremen
2 cs, A Smith & Sons, Elder, Bremen
10 cs, G Meier & Co, Elder, Bremen
9 cs, J Marsching & Co, Elder, Bremen
14 cs, Gerstendorfer Bros, Elder, Bremen
1 cs, J Marsching & Co, Werra, Bremen
2 cs, S G Levy, Elder, Bremen
3 cs, G Meier & Co, Elder, Bremen
4 cs, L Rosenfeld, Elder, Bremen
3 cs, W F G Geise, Ems, Bremen
3 cs, 450 D, J Marsching & Co, Trave, B'n
BUCHU LEAVES—8 bls, 2682 D, Stallman & F, Helvetia, L'don
CALAMUS—14 bgs, Stallman & F, Santiago, Hull
CARDAMOMS—4 cs, 187 Ds, H E Williams, Robliant, London
CEMENT—56 cks, 18800 Ds, R Crooks & Co, Helvetia, London
200 cks, H Fleming, Helvetia, London
1500 cks, J Stevens, Earl Burgess, London
500 cks, Marcini & Co, D Brown, London
1000 cks, E Thiele, Rotterdam, Rotterdam
1120 bll, Barber & M, J Weisenhorn, Bremen
3199 cks, J Brand, Marengo, London
1680 cks, J W Binney, Rialto, Newcastle
CHALK—6 cs, T Goebel & Co, Ems, Bremen
CHAMOMILE FLOWERS—3 bls, 253 D, McKesson & R, Elder, B'n
CHAMOMILIS—1 cnk, 110 D, Stallman & F, Elder, Brmen
CHEMICAL COMP—2 cs, G Gennert, Russia, Hamburg
PREP—1 pkg, Schering & G, Hammonia, Hamburg
5 kgs, 550 D, Schering & Glatz, Hammonia, Hamburg
5 cs, 713 Ds, E Wattenburg, Ems, Bremen
1 pkg, W Pickhardt & K, Aller, Bremen
CHEMICALS—3 cs, Lutz & Movius, Elder, Bremen
CHESTNUT EXT—5 cks, 2528 D, Baltimore Chem Co, La Normandie, Havre
CHINA CLAY—3 cks, 1033 D, Whiting & Son, La Gasgogne, H'e
CHINESE BLUE—2 cks, 387 D, L W Morris & Son, Schiedam, A'm
CHROME YELLOW—11 cks, A B Ansbacher & Co, Helvetia, London
CINNAMON—2 bls 193 D, Bennett, S & Co, Helvetia London
CLAY—109 tons, E Thiele, J Weisenhorn, Bremen
85 tons, T Goebel & Co, Ems, Bremen
63 tons, J Goebel & Co, J Weissenhorn, Bremen
75 cs, 7 tons, M Lienau & Co, American Lloyds, Cadiz
5 tons, G C Lennig & Co, Sorrento, Hamburg
112 tons, J Goebel & Co, Trave, Bremen
250 cks, E Thiele, Avonmore, Rotterdam
CLOVES—67 cs, 7238 D, Packard & James, Marengo, Hull
62 bgs, J H Recknagel, Helvetia, London
1 cs, 207 D, Bennett, S & Co, Helvetia, London
COCA LEAVES—2 bls, 187 D, W R Grace & Co, Colon, A'wall
24 bls, 3930 D, Lanman & K, Colon, Aspinwall
2 bls, 200 D, Stallman & F, Helvetia, London
COCOA—100 cs, 11200 D, J P Smith, Helvetia, London
COLCOTHA—44 pgs, 10690 Ds, H E Williams, Robliant, London
9 cks, 6570 Ds, H E Williams, Robliant, London
COLOCYNTHS—24 pgs, 3920 D, Stallman & F, Helvetia, London
COLORS—2 cs, J Marsching & Co, Elder, Bremen
6 cs, J C Bloomfield & Co, Adriatic, L'pool
5 cks, A B Ansbacher & Co, Helvetia, London
2 cs, 441 D, Sykes & S, La Normandie, Havre
ENAMEL—1 cs, A Klipstein, Werra, Bremen
COPAIBA—9 bxs, 825 D, S Samper & Co, Ailsa, Savanilla
CORKSQUARES—330 sks, J Robinson & Co, American Lloyd, C'z
CORKWOOD—147 bls, J Robinson & Co, American Lloyd, Cadiz
DEXTRINE—60 cks, 13519 D, C Morningstar & Co, Sorrento, H'g
DUTCH METAL—7 cs, G Meier & Co, Elder, Bremen
2 cs, Perry & Ryer, Trave, Bremen
DYEWOOD EXT—20 cks, 14014 D, J C Bloomfield & Co, La Normandie, Havre
FISH SOUNDS—4 bgs, 1644 D, G Amsinck & Co, Valencia, Pto Cabello
FLOCKS—42 bls, 4024 D, H Kohnstamm & Co, Hammonia, H'b'
20 bls, H Kohnstamm & Co, Hammonia, H'burg
3 bgs, 331 D, Kennedy & Moon, La Normandie, Havre
FRANKFORT BLACK—9 cks, 3685 D, C Wix & Co, Schiedam, R'm
FUSTIC—87204 D, J W Wilson & Co, St Croix, Campeachy
GELATINE—10 cs, 998 D, W & H Erdtmann, Hammonia, H'burg
1 cs, G Meier & Co, Elder, Bremen
5 cks, G W Sheldon & Co, Wisconsin, L'pool
20 cs, 2200 D, Stallman & F, Schiedam, R'dam
GINGER—1 cs, 52 D, Bennett, S & Co, Helvetia, London
ROOT—22 bbls, 3172 D, Leaycraft & Co, Helvetia, L'don
GLASS COLORED—66 pgs, 16244 D, Heroy & M, Nevada, L'pool
GROUND—120 cs, T W Morris & Co, Rhyniand, Ant'p
MIRROR—10 cs, 5394 ft, A Arnstein & Co, Schiedam, R'm
14 cs, 6687 ft, Sigmund Cohn, Schiedam, R'dam
55 cs, Bendit, Drey & Co, Schiedam, R'dam
22 cs, S Bache & Co, Schiedam, Amsterdam
1 cs, 237 ft, Sonweine & Co, Rhyniand, Antwerp
45 cs, 23722 ft, S Binswanger & Co, Rhyniand, Antwerp
9 cs beveled, S Bache & Co, Rhyniand, Antwerp
29 cs, 14293 ft, S Bache & Co, Rhyniand, Antwerp
23 cs, 11387 ft, Vanhorne, G & Co, Rhyniand, Antwerp
16 cs, 30133 ft, Bendit, D & Co, Rotterdam, R'm
PLATE—33 cs, 12412 ft, S Bache & Co, Rhyniand, Antwerp
39 cs, 13913 ft, H H Cahn, Rhyniand, Antwerp
10 cs, J Fitzpatrick & Co, Egypt, L'pool
7 cs, 905 ft, Holbrook Bros, Nevada, L'pool
42 cs, S Bache & Co, Circassia, Glasgow
3 cs, 1097 ft, Sonweine & Co, Noordland, Antw'p
10 cs, 5744 ft, S Bache & Co, Crystal, Newcastle
12 cs, 4677 ft, Holbrook Bros, Noordland, Antwerp
17 cs, 13467 ft, S Bache & Co, Adriatic, L'pool
3 cs, 2494 ft, E A Boyd & Son, Adriatic, L'pool
5 cs, 816 ft, Heroy & M, Nevada, L'pool
24 cs, 6368 ft, J A Waller, Britannic, L'pool
4 cs, 805 D, Jac Kahn, Rhyniand, Antwerp

WINDOW—134 bxs, 12276lb, T W Morris & Co, Nevada, L'n
12 bxs, 600 ft, J Fitzpatrick & Co, Egypt, L'p'l
55 bxs, 2750 ft, Dougherty, E & M, Egypt, L'pool
15 cs, 11883 ft, S Isaacs & Co, Schiedam, Amsterdam
329 cs, 19080lb, T W Morris & Co, Noordland, A'p
116 cs, 23925lb, McKesson & R, Polaria, Hamburg
71 cs, 30885lb S Bache & Co, Crystal, Newcastle
30 cs, 3250lb, T W Morris & Co, Rhyniand, A'p
6097 cs, 304440lb, J Fitzpatrick & Co, Rhyniand, Antw'p
1122 cs, 65350lb, Holbrook Bros, Rhyniand, Antwerp
23 cs, 211 ft, Jac Kahn, Rhyniand, Antwerp
GLUE—9 cks, 8874lb, B W Jones, Santiago, Hull
15 pgs, 5510lb, E Lerbungat & Co, Robiiant, London
3 cks, 672lb, E Lerbungat & Co, La Normandie, Havre
30 cks, 31288lb, B W Jones, Nevada, L'pool
GLYCERINE REF—15 cs, 1512lb, E Ping, Niagara, Havana
GUM BENJAMIN—2 cs, 294lb, Stallman & F, Helvetia, London
12 cs, J R Townsend & Co, M Belle, S'pore
CHICLE -19 bgs, 3359lb, L Mongo, Jr & Co, C of Alexandria, Tuxpan
5 bgs, Dodge & O, C of Alexandria, Tuxpan
190 bgs, J W Wilson & Co, C of Alexandria, Tuxpan
COPAL—258 cs, 52133lb, J R Townsend & Co, M Belle, S'pore
50 cs, 10100lb, J R Townsend & Co, Mystic Belle, S'pore
KAURI—1016 cs, 221700lb, Arnold, C & Co, A Abbot, A'd
1100 cs, 224384lb, E Hill's Son & Co, A Abbot, A'l'd
1637 cs, 328107lb, Arnold, C & Co, A Abbot, Auckland
1000 cs, 200000lb, Murphy & Co, A Abbot, Auckland
257 cs, 64764lb, Knudson, P & Co, A Abbot, Auckland
TRAG—6 cs, 932lb, Stallman & F, Helvetia, London
GYPSUM—100 tcs, 79182lb, G A & E Meyer, Crystal, Newcastle
HYDROLINE—9 cks, 2461lb, Bang & Co, Robiiant, London
INDIAN RED—10 cks, 12411lb, J W Masury & Co, Santiago, Hull
7 cks, 6820lb, G A & E Meyer, Santiago, Hull
INDIGO—84 chts, 52136lb, Howe, B & Tay, Regent, Calcutta
EXT—28 cks, 12458lb, W Pickhardt & K, Helvetia, L'don
2 cks, 1220lb, J C Bloomfield & Co, Adriatic, L'p'l
INSECT POWDER - 10 kgs, 1452lb, Jacob Ziegley, Adriatic, L'pool
IODIL—2 cs, C Georgi, Rhyniand, Antwerp
IRON OXIDE—20 cks, 22008lb, H E Williams, Robiiant, London
LEAD—2407 pigs, 331880lb, Ladenburg & T, Hamburg, H'burg
LEECHES—4 cs, E Fougera & Co, La Normandie, Havre
LICORICE ROOT—15 bls, 2108lb, G Amsinck & Co, Alexandria, Marseilles
LIME ARSENIATE—187 kgs, 15324lb, H E Williams, Robiiant, L'n
JUICE—70 cs, Middleton & Co, Trinidrd, St Kitts
LINSEED—1451 bgs, 4250 bush, Campbell & T, Helvetia, London
5462 bgs, 15886 bush, Campbell & T, Robiiant, London
LOGWOOD—350000lb, H Kainer & Co, Lackawanna, Pt de Paix
11288lb, L Brandeis & Co, C of Alex, Campeachy
430250lb, Kunhardt & Co, J Fowler, Cape Hayti
650000lb, T H Messenger & Bro, W Laury, Gonaives
621483 lb, J W Wilson & Co, St Croix, Campeachy
EXT—5 bbls, H Brueckman, Rhyniand, Antwerp
MADDER—10 cks, Stamford Mfg Co, Schiedam, Amsterdam
MAGNESIA CALC—20 tcs, 1200lb, Crystal, Newcastle
CARB - 20 cks, 4000lb, Crystal, Newcastle
MANGANESE ORE—19 cks, 22742lb, J Lee & Co, S of Nev, Glasg'w
MEDICAL BARKS—3 cs, 219lb, McKesson & R, Polaria, H'burg
ROOTS—5 cs, 1177lb, McKesson & R, Polaria, Hamburg
20 pgs, 3377lb, Eimer & A, Santiago, Hull
MUSK—4 pgs, M Aalholm, La Normandie, Havre
NUTMEGS—97 bxs, 6453lb, E R Durkee & Co, Marengo, London
OCHER—1 bx, 15lb, Sykes & S, La Normandie, Havre
OIL BERGAMOT—20 bxs, 500lb, McKesson & R, R F Matthews, Palermo
COCOA—20 cks, 21746lb, T M Marc, Adriatic, Liverpool
1 csk, 180 gls, Howland & A, Trinidad, Dominica
29 cks, 33611 lbs, T M Marc, Britannic, L'pool
ESSENTIAL—1 cs, 11lb, McKesson & R, Polaria, Hamburg
5 cs, Dodge & O, Eider, Bremen
JUNIPER—2 cs, 220lb, McKesson & R, Polaris, Hamburg
LAUREL—1 cs, 110lb, J B Horner, Ems, Bremen
LAVENDER—6 cs, McKesson & R, Greece, London
LEMON—25 bxs, 625lb, McKesson & R, R F Matthews, Pale'o
1 cs, 10lb, Aug Giese, Eider, Bremen
MIXING—25 bbls, Crew, Levick & Co, Helvetia, London
MUSTARD—5 cs, 130lb, J B Horner, Ems, Bremen
ORANGE—10 bxs, 250lb, McKesson & R, R F Matthews, Pal'o
WINTERGREEN—4 dms, 240lb, Fritzsche Bros, Eider, Br'n
ORANGE MINERAL—15 cks, 10734lb, L Windmuller & R, Rotterdam, Rotterdam
50 cks, 34735lb, L Windmuller & R, Rotterdam, R'dam
ORCHILLA WEED—6 bls, 2131lb, Goodwin & Sons, Ezypt, L'pool

PAINT—100 pgs, 13298lb, G N Gardner, Adriatic, L'pool
1 cs, 110lb, Geisenheimer & Co, Eider, Bremen
PEPPER—2381 bgs, 334743lb, Winter & S, Titan, Singapore
50 bgs, 8424lb, Thurber, W & Co, Helvetia, London
1231 bgs, 179284lb, A A Cobb, Mystic Bell, Singapore
3 bgs, 451lb, Bennett, S & Co, Helvetia, London
100 bgs, 16857lb, Thomsen & T Spice Co, Helvetia, L'don
PERFUME—1 cs, J Seligman, Hammonia, Hamburg
2 cs, 34 gls, J W Seligman, La Normandie, Havre
1 cs, H Dreyfus, La Normandie, Havre
2 cs, 19 gls, H Dreyfus, La Normandie, Havre
1 cs, Sykes & S, La Normandie, Havre
POPPY SEED MEAL—25 bgs, 3250lb, F E McAllister & Co, Polaria, Hamburg
POTASH CARB—15 cks, 15600lb, W Pickhardt & K, Rotterdam, Rotterdam
35 cks, 35941lb, A Klipstein, Rotterdam, Rotterdam
PRUSS—5 cks, 3187lb, Roessler & H, Helvetia, London
RED PRUSS—10 cks, 5424lb, P Karcher, Rotterdam, R'dam
SULPH—3 cs, Aug Loos & Co, Umbria, L'pool
PUMICE STONE—161 cks, D de Castro & Co, A Accame, Genoa
QUININE—50 cs, 35000 ozs, J L & D S Riker, Eider, Bremen
5 cs, 5000 ozs, L Englehorn, Schiedam, A'dam
20 cs, 10000ozs, W H Schieffelin & Co, Trave, Bremen
RHUBARB—4 cs, 1097lb, Stallman & F, Helvetia, London
23 cs, Dodge & O, Helvetia, London
25 cs, Stallman & F, Helvetia, London
SARSAPARILLA—15 bls, Coombs, C & Eddy, Hondo, Pt Cortez
6 bls, 851lb, Coombs, C & Eddy, Hondo, Pto Cortez
SHELLAC—250 cs, 37500lb, J R Townsend & Co, Helvetia, L'don
1 cs, 322lb, Stallman & F, Helvetia, London
SOAP CASTILE—110 cs, 16477lb, A Stephani & Co, American Lloyd, Seville
SODA ASH—68 tcs 109558lb, J L & D S Riker, C of Chicago, L'l
233 tcs, 405518lb, Wing & Evans, C of Chicago, L'pool
132 cks, 222058lb, Wing & Evans, Egypt, L'pool
66 tcs, 106904lb, J L & D S Riker, C of Chester, L'p'l
132 tcs, 230092lb, Wing & Evans, Nevada, L'pool
283 tcs, 489303lb, Wing & Evans, C of Chester, L'pool
262 tcs, 445491lb, Wing & Evans, Britannic, L'pool
241 tcs, 448851lb, Wing & Evans, Rialto, Newcastle
CAUSTIC—100 dms, 62750lb, J L & D S Riker, Adriatic, L'l
250 dms, 1625 0lb, E Hill's Son & Co, Egypt, L'pool
175 dms, 1137000lb, Wing & E, H B Hyde, L'pool
350 dms, 206500lb, T M Marc, Adriatic, L'pool
150 dms, 94582lb, Jas Lee & Co, Adriatic, L'p'l
350 dms, 223844lb, T M Marc, Britannic, L'pool
CRYSTALS—1000 cks, 418451lb, Wing & E, Rialto, N'castle
NITRATE—8121 pgs, 351472lb, Heminway & B, Pendleton, Valparaiso
9210 bgs, Hollingworth & P, Onaway, Iquique
SAL—283 cks, 115000lb, G A & E Meyer, Crystal, N'castle
SULPH—80 cks, 112107lb, J Lee & Co, Crystal, Newcastle
SPONGE—19 cs, Lasker & B, Hammonia, Liverpool
71 bls, C A Salmon & Co, Niagara, Havana
SUMAC LEAVES—125 bls, 55952lb, Lawrence Giles & Co, Italia, Palermo
EXTRACT—20 cks, Geisenheimer & Co, Rotterdam, R'dam
TAMARINDS—5 bbls & 23 kgs, G F Lough & Co, Marie St M'tins
TAPIOCA—5 bbls, 689lb, Bennett S & Co, Helvetia, London
TURKEY RED—10 cks, 12037lb, J W Masury & Co, Santiago, H'l
ULTRAMARINE—25 cks, 1470lb, W Pickhardt & K, Schiedam, Rotterdam
3 pgs, L W Morris & Son, Schiedam, Rotterdam
6 cks, 3336lb, Abegg, Daeniker & Co, Ems, Bremen
4 cks, 2205lb, Pickhardt & K, Noordland, A'p
12 pgs, E D Goodman, Rhyniand, Antwerp
8 cs, 2688lb, A Ansbacher & Co, Trave, B'men
VANILLA—19 cs, 1339lb, L Monjo Jr & Co, C of Alex, Tuxpan
11 cs, Dodge & Olcott, C of Alex, Tuxpan
BEANS—31 cs, 3519lb, P Harmony's Nephews & Co, C of Alex, Vera Cruz
VARNISH—17 pkgs, J P Jube & Co, Helvetia, London
VENETIAN RED—11 bbls, 3696lb, H E Williams, Robiiant, L'n
WASH BLUE—20 cs, 2240lb, T Leeming & Co, Santiago, Hull
WAX VEGETABLE—1 pg, C B Richard & Co, Hammonia, H'g
WHITE LEAD—2 cks, 1100lb, A B Ansbacher & Co, Helvetia, London
35 pgs, 16240lb, A B Ansbacher & Co, Robiiant, L'don
ZINC OXIDE—150 cks, 31669lb, Windmuller & R, Rotterdam, R'm
500 bbls, 110230lb, G A & E Meyer, Rotterdam, R'dam

WAREHOUSED.

ANILINE COLORS—26 pgs, H A Gould & Co, Ems, Bremen
BAY RUM—6 cks, 843 gls, Tissat & Co, River Avon, Arroyo
15 cks, 1262lb, J D Cornuch & Co, River Avon, Arroyo
5 cks, 715 gls, C M Roof, River Avon, Arroyo
10 bbls, 456lb, Paris, Allen & Co, Alliance, St Thomas
CACAO BUTTER—2 cs, 406lb, H Martin, Robiiant, London
CORKS—101 bls, F Llado & Co, Helvetia, London
GLASS WINDOW—973 cs, 67010lb, T W Morris & Co, Noordland, Antwerp
GLUE—8 bls, 1650lb E Lerbungat & Co, Robiiant, London
MATCHES—101 cs, C Rosenstein & Co, Santiago, Hull
OIL ESSENTIAL—11 cs, Dodge & O, Helvetia, London
POTASH BICHRO—140 cks, 12342lb, J L & D S Riker, S of Nevada, Liverpool
SODA—40 cks, 27288lb, J L & D S Riker, S of Nevada, L'p'l
SPONGE—96 bls, Mansell & Blume, Santiago, Nassau

IMPORTS AT CHICAGO

Week Ending July 9, 1887.

COLORS - 6 cs, E Arnstein
GLASS—4 cs, First National Bank
PLATE—5 cs, Geo F Kimball
WINDOW—50 cs, J H Rice & Co
GREASE - 10 cks, C H Besley & Co
SODA CAUSTIC—121 dms, Kenly & Jenkins
WAX—6 pgs, C P Kimball & Co

IMPORTS AT MONTREAL.

Week ending July 9, 1887.

ACID CARBOLIC—5 cs, Lyman Sons & Co, Sardinian, L'pool
5 cs, Lyman Sons & Co, Sarnia, Liverpool
CITRIC—5 kgs, Elliot & Co, Sarnia, Liverpool
BLEACHING POWDER—9 cks, order, Sarnia, Liverpool
CEMENT—1312 cks, W & F P Currie & Co, Corean, London
COLORS—52 dms, Crathern & C, Sarnia, Liverpool
11 pgs, Sanderson, P & Co, Sarnia, Liverpool
CREAM TARTAR—1 ck, order, Corean, London
GLUE—4 cks, order, Sarnia, Liverpool
OIL LINSEED—30 bbls, Jas Robertson, Sarnia, L'verpool
350 bbls, order, Dominion, Bristol
SHELLAC—15 cs, order, Corean, London
SODA—1 ck, Evans, S & M, Sardinian, Liverpool
CAUSTIC—100 dms, order, Sarnia, Liverpool
SULPHATE OF COPPER—57 cks, Bellhouse, Dillon & Co, Sarnia, Liverpool

IMPORTS AT BALTIMORE.

GUANO—280 tons, order, Stephen Bishop, Orch'lla
OIL OLIVE—13 bbls, order, Cortesia, Genoa
2 bbls, J J Thomsen, Cortesia, Genoa
ORRIS ROOT—2 cks, order, Cortesia, Genoa
SOAP CASTILE—325 bxs, J J Thomsen, Cortesia, Genoa
365 bxs, order, Cortesia, Genoa
SODA ASH—380 cks, 65783lb, Wing & E, Barrowmore, L'pool
CAUSTIC—87 cks, 5650lb, Wing & E, Barrowmore, L'pool

IMPORTS AT NEW ORLEANS

CASSIA—20 cs, Lussignaus, Marseilles
337.6 bbls, M Louise, Bremen
CEMENT—8 cks, Statesman, Liverpool
2680 cks, Hampton Court, Bremen
OIL—7 cks, Picqua, Palermo
ORANGE FLOWER WATER—70 cs, Lussignano, Marseilles
16 pgs, Lussignano, Marseilles
PEEL—3 cs, Lussignano, Marseilles
SALTPETRE—182 cks, Statesman, Liverpool
SARSAPARILLA—100 bbls, Costa Rican, Pt au Prince
6 bbls, Warrior, Bocas del Toro
SOAP—60 cs, Lussignano, Genoa
527 cs, Lussignano, Marseilles
SODA—28 cks, Statesman, Liverpool
ASH—100 kgs, Statesman, Liverpool
CRYSTALS—56 bbls, Statesman, Liverpool
TALC—100 bgs, Lussignano, Genoa

IMPORTS AT BOSTON.

ALKALI—55 cks, order, Cephalonia, Liverpool
BARYTES CARB—10 cks, Fiske, C & Co, Istrian, Liverpool
BAY RUM—5 cks, Gust Preston, Edward D, Arroyo
50 bbls, Gust Preston, Edward D, Arroyo
BLEACH—179 cks, Morley & Co, Istrian, Liverpool
178 tcs, Linder & Meyer, Istrian, Liverpool
215 cks, order, Istrian, Liverpool
298 cks, order, Kansas, Liverpool
CEMENT—500 bbls, order, Prydain, London
COCOA—2 cs, C E & B H Fabens, Lion, Cayenne
COLOR—2 kgs, order, Cephalonia, Liverpool
5 cks, order, Istrian, Liverpool
2 kgs, order, Istrian, Liverpool
1 cs, order, Istrian, Liverpool
EXTRACT—110 cs, Beach & Co, Istrian, Liverpool
25 bbls, order, Istrian, Liverpool
25 bbls, order, Istrian, Liverpool
GLASS PLATE—9 cs, Hills, Turner & Co, Istrian, Liverpool
GUM—15 cks, order, Istrian, Liverpool
COPAL—30 pgs, J F Brooks, Fantee, Accra
LIME JUICE—310 cs, Wright & Rich, Istrian, Liverpool
310 pgs, Wright & Rich, Kansas, Liverpool
LOGWOOD—20 cks, J M O'Rourke, Istrian, Liverpool
65 tons, order, Zalma, Port au Prince

ENGLISH CUDBEAR

Casks. Packages. Kegs.

W. A. ROSS & BRO.,
56 PINE ST.
NEW YORK.

CARBONATE OF AMMONIA.
Chlorate of Potash.
Oxalic Acid.
Zinc Dust. (Indigo Auxiliary.)
Blood and Egg ALBUMEN.
ANILINE COLORS.

Schulze-Berge & Koechl,
75 PINE STREET, NEW YORK.
IMPORTERS OF CHEMICALS AND DYESTUFFS,
AND SOLE AGENTS FOR
Salol, pat'd, the new Antiseptic.
Made under License of the Patentees of Dr. F. v. Heyden, nachf. Radebeul.

MIRBANE OIL.
Pure Aniline Oil & Salt
SALICYLIC ACID.
Archil Extract.
Indigo Extract.
ALIZARINE.

ABRAM De RONDE & CO.
Importers and Manufacturers
12 Cedar Street, New York.

Dyewood Extracts,
Archil "
Indigo "
Sumac "
Bark "
Chestnut "
Hemlock "

Cudbear,
Sumac American
Sumac Sicily,
Gambier,
Cutch,
Divi Divi,
Nut Galls.

Chemicals AND Dye Stuffs.

Tin Crystals,
Stannate Soda,
Muriate Tin,
Oxy Mur. Tin,
Oxy Mur. Antimony,
Antimony Salts,
Nitrate Copper,

Nitrate Iron,
Iron Liquor,
Prussiate Potash, Red,
" " Yel
Oxalic Acid.
Glauber Salt.
Fullers Earth.

380000 lbs, order, Zulma, Port au Prince
NUTMEGS—145 bxs, order, Prydam, London
OIL OLIVE—100 cks, S S Pierce & Co, Cephalonia, Liverpool
PALM—938 cks, J F Brooks, Fantee, Accra
PERFUME—1 cs, S S Pierce & Co, Cephalonia, Liverpool
POTASH BICHROM—20 cks, J L & D S Riker, Scandinavian, Glasgow
CARB—30 cks, J L & D S Riker, Scandinavian, Glasgow
22 cks, order, Kansas, Liverpool
SODA ASH—6 cks, J R Leeson & Co, Scandinavian, Glasgow
212 cks, Linder & Meyer, Istrian, Liverpool
58 cks, Morey & Co, Istrian, Liverpool
28 cks, order, Istrian, Liverpool
167 cks, Linder & Meyer, Istrian, Liverpool
79 cks, J L & D S Riker, Kansas, Liverpool
CAUSTIC—200 dms, Linder & Meyer, Istrian, L'pool
150 dms, E & F King & Co, Kansas, L'pool
300 dms, order, Kansas, L'pool
CRYSTALS—280 bbls, E & F King & Co, Kansas, L'pool
280 bbls, order, Kansas, L'pool
TURPENTINE—1 bbl, Cutler Bros & Co, Cephalonia, L'pool
VARNISH—2 cs, Wadsworth, Howland & Co, Prydain, London
6 cs, order, Istrian, L'pool

IMPORTS AT PHILADELPHIA.

BLEACH—50 cks, E Yarnall & Son, Br Prince, L'pool
10 cks, C Lennig & Co, Br Prince, L'pool
96 cks, Cooper Smith & Co, Br Prince, L'pool
CLAY—100 cks, B Monford, Manitoban, Glasgow
159 bgs, W H Walbaum & Co, Albano, Swansea
INDIGO EXT—5 cks, Brown Bros & Co, Lord Clive, L'pool
KAINIT—600 tons, order, Derby, Hamburg
POTASH MURI—3000 bgs, order, Fidelio, Hamburg
PURPLE ORE—300 tons, order, Rapide, Liverpool
200 tons, H E Collins & Co, Mattia, L'pool
SODA ASH—65 cks, Wing & Evans, Lord Clive, L'pool
110 cks, order, Lord Clive, L'pool
241 cks, order, Br Prince, L'pool
42 cks, C Lennig & Co, Br Prince, L'pool
CAUSTIC—75 dms, Cooper Smith & Co, Br Prince, L'poo
75 dms, order, Br Prince, L'pool
50 dms, E Yarnall & Son, Br Prince, L'pool
50 dms, order, Lord Clive, L'pool
125 bbls, Penn Salt Mfg Co, Lord Clive, L'pool
150 dms, Cooper Smith & Co, Lord Clive, L'pool
NITRATE—9120 bgs, Hollingsworth & P, Onaway, Iquique
SAL—280 bbls, J I Keefe, Lord Clive, L'pool
374 bbls, J I Keefe, Br Prince, L'pool
SALTS—70 cks, C Lennig & Co, Fidelo, Hamburg
SUMAC—500 bgs, I Jeanes & Co, Bracadalle, Palermo

TRADE REPORTS.

Liverpool.

Under date of June 25, 1887, Mr. Geo. G. Blackwell says:

Minerals—More has been done this week, but there is little alteration to report in prices. Manganese is a trifle easier, but stocks are low, and an advance is looked forward to. Magnesite, containing 98 per cent carbonate of magnesia, without change. Raw lump still continues to offer freely at 30@35s, raw ground £6 10s and calcined ground £12. Bauxite, Irish Hill quality, continues in good demand: Lump 20s, seconds 16s, thirds 12s, ground 35s. Dolomite, 7s 6d per ton at the mines. French chalk continues steady, and prices are unaltered at 85@95s for medium, and 97s 6d@£5 5s for the best GGB. Barytes are still scarce and prices are firm, especially for best qualities. Carbonate: Lump qualities still very scarce, and eagerly bought up. Finest selected crystal lump scarce at £6; No. 1 lump 90s, best lump 82s 6d, seconds and good nuts 75s, smalls 50@60s, best ground £6 5s, and selected crystal ground £8 10s. Sulphate: Best lump 35s 6d, good medium 30s, medium 25s 6d@27s 6d, common 18s 6d @20s, ground, best white, GGB brand, 60s, common 45s, grey 32s 6d@40s. Pumice stone continues in demand; ground £3 10s@7, specially selected lump, finest quality, £9@10 10s. Iron ore quiet. Purple ore, 7s 6d. Emery stone steady at £5 10s@6 for lump, smalls £5@5 5s. Fluor and felspar without alteration. Fullers' earth unaltered; Emeral brand, best lump, 50s, fine impalpable ground £7. Wolfram and tungstate of soda steady, and prices are unchanged. Tungsten metal is unaltered at 2s 6d per lb. Tungsten alloy 2s per lb. Chrome ore is still further inquired for, 80@85s being quoted for 50 per cent, and 60s for 40 per cent. Antimony ore £8@10 for fair quality; best £18 10s. Antimony metal £31@32 10s. Uranium 29s@32s 6d. Asbestos: Best rock £18, brown grades £14@16. Potter's lead £11@12. Calamine 60@80s. Strontia remains steady; sulphate (celestine) 19@20s. Carbonate (native) £15@16, powdered (manufactured) £11@12. Plumbago: Best Ceylon lump £25@35, good £20@21, chips £8@16, best ground £30, £25 and £30; other qualities £5@15 per ton. French sand 18@19s. Ferro manganese, 80 per cent packed, £11 2s 6d, 70 per cent packed £10, 60 per cent packed £8 16s, 50 per cent unpacked £7 15s, 40 per cent unpacked £7 5s. Spiegel, 20 per cent, £4 12s 6d. Silicon spiegel, 9 per cent, £8. Chrome pig, 9 to 10 per cent, £8@8 10s. Bitumen, finest picked, £35; original prime £18@23, good £8.

Colors unchanged. Ochers: Oxfordshire £10, £12, £14 and £16, Derbyshire 50@55s. Welsh, best, 50@55s, seconds 47s 6d, common 18, Irish 45s, Devonshire 40@45, French, J. C., 55@60s, M. C., 65@67s 6d. Umber: Turkish, cargoes to arrive, 40@50s, Devonshire 50@55s. White lead £17. Red lead £16. Oxide of zinc: V. M. No. 1 £19, V. M. No. 2 £18. Venetian red £6 10s. Cobalt: Prepared oxide 8s, black 7s 3d, blue 6s 6d. Zaffres: No. 1 3s 6d, No. 2 2s 6d. Terra alba: Finest white 60s, good 40@50s. Rouge, Best £24, ditto lb jewellers 1s per lb. Drop black 25@28s 6d. Paris white 60s. Emerald green 10d per lb. Derbyshire red 60s. Vermillionette 10d per lb.

Under date of June 23, 1887, Messrs. Robert Crooks & Co. say:

Soda ash without change. 48 per cent carbonated is quoted 31-32d, although some makes are obtainable at 15-16d. High test carbonated and caustic ash 15-16d per degree per cwt.

Caustic Soda—There continues a fair demand but there is no improvement in values. We quote 60 per cent £6 16s 3d; 70 per cent £7 16s 3d; 74 per cent £8 6s 3d.

Bleaching powder, notwithstanding the hot weather and the consequent demand for purifying purposes, is still obtainable at £7 11s 3d@7 12s 6d.

Soda Crystals—Newcastle makes have advanced to £4 2s 6d. Liverpool unchanged.

Under date of June 24, 1887, Mr. D. B. McCulloch says:

Chemicals continue dull and inanimate, the holidays interfering with business. Saltcake unchanged at 24s@24s 6d. Soda ash weak at 15-16d@1d. Caustic soda easier, 70 per cent. white £7 16s 3d@17s 6d, 60 per cent. £6 16s 3d@17s 6d, cream £6 6s 3d@7s 6d f o b. Bleaching powder offering more freely at £7 6d 3d@7s 6d soft wood on rails, £7 10s@12s 6d hardwood f o b. Chlorate of potash quiet at 6d@6 1-16d. Borax hardening; English refined £26 10s@£27. Potashes firm, 1st Montreal 26s. Sulphate of copper £14@14 2s 6d. Oxalic acid 4d@4¼d. Yellow prussiate of potash 7¼d@7½d. Citric acid strong at ½d@¾d.

Manure materials are maintained—Nitrate of soda steady at 9s@9s 3d spot, 8s 6d@9d to arrive, according to distance. Sulphate of ammonia has further advanced, good gray 24 per cent. £12 10s@15s f o b. Hull and Liverpool 24½ per cent. £12 5s@7s 6d f o b Leith.

Manganese ore is not readily saleable. Metallic is 1d@1s 3d per unit. Peroxide 45s 6d @47s 6d on 70 per cent.

The Match Industry.

It is just fifty-four years since the match industry came into existence, it being pretty certain that the first match works were started in Vienna in 1833. Other works followed rapidly in all countries. The original match contained phosphorus, chlorate of potassium, sulphide of antimony, gum arabic. The gum arabic was soon replaced by the less expensive and less hygroscopic glue; the explosive chlorate of potassium by peroxides of manganese, of lead, and other oxidising agents, and the antimony was altogether discarded. But no substitute could be found for the poisonous phosphorus, although it was soon seen that the large phosphorus head was more dangerous than useful. The discovery in 1847 by Schroetter of the non-poisonous and less ignited red phosphorus promised to do away with the ordinary phosphorus. But long years passed before Sweden sent into the world large quantities of Tonkoping matches. Meanwhile Lorinser had in 1857 distinctly verified as a phosphorus necrosis the fearful new disease which visited match works. During the strong agitation against phosphorus matches that followed, the large phosphorus head was once more reduced in size, and the match trade was in some countries placed under very sharp restrictions. For some time France altogether interdicted phosphorous matches, but the new matches were also far from faultless; the potassium chlorate rendered them explosive, and the heads would project far away on being struck, or would drop off whilst still glowing; their higher price was also against them. Yet Denmark enacted in 1875 a law, still in force, by virtue of which none but such matches as light only on specially prepared paper, commonly called Swedish safety matches, are tolerated; this law does not appear to interfere seriously with the comfort and preference for economy of the public. Switzerland, so lately as 1879, banished all matches containing ordinary phosphorus. The consequence was that the market was flooded with all sorts of cheap matches, non-phosphoric, and therefore presumably non-poisonous, that would light on any rough surface. The greater number of them, however, proved highly explosive and poisonous, a great variety of explosive lead and also copper compounds being used. They were also too hygroscopic, mainly on account of hyposulphate and nitrate of lead. The law of 1879 was therefore cancelled in 1882, and since then phosphorus matches have again been as common in Switzerland as elsewhere. Dr. Wiederhold of Cassel and many others have spared no exertions to find a phosphorus substitute. Many of his non-phosphoric mixtures have been taken up and re-invented by industrious manufacturers, but none have answered, and we have, after all, only two sorts of matches—the phosphorus match and the safety match.—*Oil Trades Gazette.*

The use of matches in the United States is now estimated by competent authorities at eight a day for every man, woman and child. In Great Britain it is nine; in Belgium ten, and for the rest of Europe seven. The daily consumption of matches in this country is therefore not far from 500,000,000, to meet which we imported last year matches to the value of $31,000, and manufactured matches to the value of nearly $5,000,000. The sulphur match is not so old as our railroads, and during the early part of this century a safe and easy means of furnishing fire was considered one of the wants of the age. The first parlor matches of this century were sold at the rate of $4 75 a hundred. The match consisted of a wooden splint tipped with chlorate of potash and sugar; when plunged into a bottle containing sulphuric acid it caught fire. This dip-splint was costly and dangerous and could not supplant the sulphur-tipped match ignited by flint, steel and tinder, which venerable device held its place until John Walker, an Englishman, invented lucifer matches, some time about 1829. His first friction match was made in 1832, of chloride of potash and sulphuret of antimony; it was ignited by strong compression between two pieces of sandpaper. Phosphorus appeared a year or two later, and despite various disadvantages it has never been displaced.

Until twenty-five years ago the larger part of the matches used in this country were imported from England and Germany. Then the manufacture begun here, and prospered greatly. For the last ten years one firm has succeeded in doing most of the business, buying up competitors or scaring away competition. The matches of American manufacture most in use to-day are the ordinary sulphur match, which constitutes four-fifths of the supply owing to its cheapness, the parlor match which gives out no offensive odor and the safety match, of which one firm enjoys a monopoly. The ordinary sulphur match is made by dipping the splints into a bath of melted sulphur and then into the phosphorus paste. The wood for the splints is commonly white pine, and sometimes beech, birch, poplar or cedar. Much of it is brought from Canada, and so great has been the demand that substitutes have been eagerly looked for. The Japanese use a paper match which may be made in this country should wood become scarce. The entire labor of match making, even to counting the matches and putting them into the boxes, is now done by machinery. The wood is cut into splints by knives working transversely, and each splint takes its place upon an endless belt which carries it to the sulphur bath and then to the phosphorus paste. The round splints are made by passing the square sticks through a steel plate perforated with round holes. The common grade of sulphur matches can now be bought at retail at the rate of ten cents for eighteen boxes, each box containing seventy-five matches, or at the rate of 135 for one cent.

Parlor matches cost twice as much as common sulphur matches, partly because of this waste of wood in making round splints. The unpleasant odor from the sulphur match comes from the burning sulphur which takes fire quickly from the phosphorus and lights the wood; without the sulphur the phosphorus would go out before lighting the wood, or a great deal of it would be required. One pound of phosphorus is said to suffice for 1,000,000 matches. In order to get rid of the brimstone smell, stearine, paraffine, or stearic acid is used instead of sulphur, and such matches burn better than sulphur ones, because the wood begins to burn the moment the match is lighted; with the common match the sulphur has first to burn away. The process of manufacture is almost similar to that of the sulphur match. Each match passes through about twenty different processes or machines before it reaches the box, and the making of the box is almost as complicated. The machinery is undergoing constant improvements, but owing to the secrecy observed by the manufacturers, little is known of the processes in detail.—New York *Post.*

MALTINE

NEW YORK, April 1, 1886.

Below please find net prices at which we shall be pleased to fill all orders from the trade for the preparations mentioned, viz.:

	Pints per doz.	5-pint Bottles each.
MALTINE plain,	$ 7 50	$2 75
MALTINE with Cod-Liver Oil,	7 50	2 75
MALTINE Ferrated	7 50	2 75
MALTO YERBINE,	7 50	2 75
MALTINE with Alteratives	10 00	3 50
MALTINE with Hypophosphites	10 00	3 50
MALTINE with Pepsin and Pancreatine,	10 00	3 50
MALTO-VIBURNIN,	10 00	3 50
MALTINE with Cascara Sagrada	10 00	3 50
MALTINE with Peptones,	12 00	4 50
MALTINE with Phosphate Iron, Quinia, and Strychnia,	12 00	4,50

MALTINE is far superior in nutritive and diastatic value to any Malt Extract manufactured in the world. There is no reconstructive that excels Maltine in phthisis and many wasting diseases.

MALTINE is a valuable food; a food of priceless value at times of emergency. In fact, in very grave gastric cases, it is a food which may often be resorted to when at one's wits' end what to do. J. MILNER FOTHERGILL.

I have subjected "Maltine" and "Trommer's Extract of Malt" to an active quantitative comparison of their diastatic activity. The results demonstrate conclusively the far greater diastatic value of Maltine, and enable me to state, without any qualification whatever, that it far exceeds in diastatic power any of the six preparations for Malt which I have examined. R. H. CHITTENDEN,
Professor of Physiological Chemistry in Yale College.

Out of fourteen trade samples of Malt Extract examined by Messrs. Dunstan & Dimmock, only three possessed the power of acting on starch. These brands were Maltine; Corbyn, Stacy & Co.'s Extract, and Keppler's Malt Extract. WILLIAM ROBERTS, M.D., F.R.S.

MALTINE, in its different forms, is the only Malt preparation we now employ, being so palatable, digestible and easily assimilated. Of its efficiency in appropriate cases there is no more doubt in our minds than there is of the curative power of quinine, cod-liver oil, the bromides and the iodides. It deserves to stand in the front rank of constructives; and the constructives, by their preventive, curretive, and curative power, are probably the most widely useful therapeutical agents we possess.
PROFESSOR L. P. YANDELL.

At the International Health Exhibition held in London, England, the only gold medal and he highest award of merit weregiven to Maltine by a jury composed of the best chemists in Europe; and recent analyses made by the most reliable authorities in Europe and America prove conclusively that Maltine in nutritive and diastatic value, is superior to all other Malt preparations now in the market.

NOTE—Physicians will observe that Maltine, as now prepared, is not so viscid as formerly made, being of a more fluid consistency; and, while retaining the nutrative and diastatic value which has given it precedence over all other Extracts of Malt, it is rendered entirely agreeable to the taste of the most fastidious and is more easily administered. As now prepared, we positively guarantee that Maltine will not ferment or congeal, in any climate or at any season of the year.

Send for pamphlet giving comparative analyses by twenty of the best Analytical Chemists in this country and Europe. We will furnish gratuitously a one-pound bottle of the Maltine Preparations to physicians who will pay the express charges.

THE MALTINE MANUFACTURING CO.,

LABORATORY: Yonkers-on-Hudson.

82 Fulton Street, New York.

French Toilet Preparations.

In a report submitted to the Hygienic Council of Paris by Drs. Dubrisay and Chatin, the authors state that the perfumery and toilet products now sold contain so many noxious substances that it is desirable the factories should be placed under special surveillance. They give a number of instances in support of their statement. The so-called "harmless and purely vegetable" hair dyes, they say, are all poisonous. "Progressive dyes" are ammoniacal solutions of nitrate of silver. The "instantaneous dyes" are a solution of litharge in lime water. "Eau des Fees" is a solution of sulphate of lead in hyposulphite of soda. "Eau Figaro" consists of three solutions: 1. Of nitrate of silver and sulphate of copper: 2. Sulphide of sodium; 3. Cyanide of potassium (to remove the silver stains). "Eau des Fleurs" is composed of rose-water, 95·5; flowers of sulphur, 2·7; acetate of lead, 2·8. Passing to cosmetics, they say "Lait antiphelique" is composed of corrosive sublimate, 1·7; oxide of lead, 4·22; sulphuric acid and camphor. "Lait de Manille" is a mixture of borax, copper, tincture of benzoin and essence of bitter almonds; "Lait de Ninon," of bismuth and zinc; "Eau Magique," oxide of lead and hyposulphite of zinc; "Eau de fleur de lys," protochloride of mercury; "Eau royal de Windsor," glycerine and oxide of lead; "Eau de Castille," hydrosulphite of soda and acetate of lead. The "Poudre Pilivore de Laforet" contains mercury (?), 60 grs.; sulphide of arsenic, 30 grs.; litharge, 30 grs.. and starch, 30 grs. "Epitiene" is simply sulphite of calcium and "Antibolbos" hypophosphite of soda. Pomades against baldness all contain cantharides and croton oil; powdered cosmetics generally contain 40 to 90 per cent. of carbonate of lead.

The Tax upon Petroleum Barrels in Germany.

The abolition of the tax upon petroleum barrels is being widely agitated in interested circles. In November, 1885, the value of an empty barrel was 4·50 mks., while the present price is 3·40 mks. A sum of 85 pf. must be deducted for the tax, so that the actual value is only 2·55 mks. The coopers are in no way profited by this tax, but on the contrary considerably injured. The imperial revenue in 1886 was benefited only to the extent of 300,000 mks by the imposition of this tax, and this amount was principally obtained from small firms who were unaware that where export was concerned the amount could be demanded back. The people injured are the petroleum importers who were formerly not accustomed to manage the export of the empty barrels themselves, and are now no longer in a position to do so. So soon as the law was passed, the American refining houses combined, and now only a few firms buy the empty barrels in Germany and to these the Germans are compelled to sell at any price which may be offered. Nobody in the German Empire is benefitted, but only America, and America will retain this advantage until the tax upon petroleum barrels is done away with.—*Kuhlow's Trade Review.*

Cotton Oil In Germany.

So soon as the demand for an increase in the industrial protective duties is made, an emphatic protest is sure to be heard from German industrial circles. Such for instance has been the case with the proposed new taxes upon cottonseed oil, which has been demanded by the German sweet-oil manufacturers. The soap manufacturers, whose business is threatened, have expressed their dissatisfaction energetically, and the Chamber of Commerce at Offenbach a. M. has petitioned against any further interference with the soap industry, which has already been brought low by sharp competition and the unfavorable conditions of freights. According to the Chamber, the present taxes have made competition with England almost an impossibility. The Barmen Chamber of Commerce has joined in this petition and remarks in its annual report, just published, that in consideration of the great quantities in which cottonseed oil is employed in the manufacture of cheap soaps, a decrease of from 4—2 mks on the present taxation of the oil when in the denatured state is extremely desirable. How far the interests of the less numerous sweet-oil manufacturers, whose trade has already been well protected, will triumph over those of the much more important soap industry, it is impossible to say. Under any circumstances it will be much to be lamented, if one of the most important materials of soap manufacture is still further taxed in order to enrich a small branch of trade in which there is hardly any competition—*Kuhlow's Trade Review.*

Treatment of Sizing by Sea Salt.

BY M. SCHACHT.

From what I saw in our paper mill in the preparation of resinous soap and the results obtained led me to try and get rid of the excess of soda needed for dissolving the rosin. Experiments showed that a lye containing 8·62 per cent of carbonate of soda was required to get a good resinous soap, although for the saponification of all the rosin a lye of 4·77 per cent of soda should be sufficient, thus leaving an excess of 45 per cent in the quantity of soda used.

This great waste of soda can be avoided and a good resinous soap obtained by treating the soap with chloride of sodium, or sea salt.

A small experiment in the laboratory will show that the resinous soap in a watery solution can be precipitated by the addition of a small quantity of chloride of sodium. The solution turns muddy at once, and the soap is precipitated in the form of a compact mass while the chloride is dissolving. In my first experiment I used a lye containing only 5 per cent. of soda, so that there was only a very small excess of alkali that was indispensable for complete saponification. After all the rosin was dissolved I added a little sea salt, and the soap was immediately precipitated in a dark brown liquor, colored by the coloring matters of the rosin and containing a very small quantity of soda along with the sea salt in solution. This, put in practice on a larger scale, might prove very advantageous in paper mills, as the great excess of soda would be replaced by an addition of sea salt. The soap was as good as any used, while the brown lye, very poor in soda and colored by the rosin, could not be used.

But another great advantage is obtained by using salt. When the soap is dissolved in hot water and salt added, the precipitation of the soap also takes place as above described. The precipitate will be of a clear brown color, but when cool will be more compact and almost white, while before being dissolved in the hot water it was clear brown. The water containing the salt in solution, on the other hand, will be dark. In the precipitate of the resinous soap of the solution by the addition of chloride of sodium, the coloring matters contained in the soap before its solution will no longer combine with it during precipitation, but will be held in the water.

The precipitated soap was whiter, according as the solution was clearer, and I obtained from a suitable dilute solution as white a precipitate as from a more concentrated one. If these experiments can be successfully used even makers of fine papers would not require to use the best qualities of rosins. A little practice would soon determine the degree of dilution to be given the soap to obtain a proper sizing, or whether a double treatment with chloride of sodium would be preferable.—*Papier Zeitung.*

The New Zealand Kauri Trade.

The New Zealand firms engaged in the Kauri trade appear very dissatisfied with the condition of the industry, and seem to entertain gloomy apprehensions concerning its future. Kauri forms an important article of export from New Zealand, the center of the trade being at Auckland, where some twenty firms of importance are interested in the resin, the collection of which has recently proceeded at a rate likely to result in the complete exhaustion of the deposits by the beginning of the next century, though the increased output has had for its first result, a glut in the market, which has brought down the value of the commodity to a level said to be so slow as to render the trade unremunerative to all parties concerned. The Kauri forest and deposits are only found in the northern-most part of New Zealand, and though the kauri resin may be obtained in quantity from the living tree, as a matter of fact the bulk, if not the whole of it, exported from New Zealand to America and Great Britain is obtained from the fossil deposits which are found under the surface of the soil partly mingled with strata of tertiary coal. The resin is mostly collected by natives, who hunt for it with a pointed steel rod, and dig it up by means of a spade, scraping off the decayed portions which occasionally adhere to the lumps. It is said that close upon 2,000 Maoris and a number of whites, mostly social wreckage from Europe, are employed in the collection of the resin, which was formerly a paying and easy occupation, but of late has become much more arduous, the most accessible layers having been exhausted. Kauri was first shipped from Auckland in commercial quantities about forty years ago, and it is computed that in the decade between 1870 and 1880 no less than 81,829,920 lbs. were exported from Auckland besides a few thousands annually shipped from other ports in New Zealand. Since then the output has greatly increased, and the world's annual consumption of kauri resin, in varnish, linoleum, and silk manufacture, for minor uses, at present is estimated at about 11,000,000 lbs. yearly. But the use of the resin is not apparently capable of any great expansion, and it would therefore seem good policy on the part of the New Zealand kauri merchants to come to a mutual understanding for carefully husbanding what still remains of the deposits in the island. There is a rumor that a movement is actually projected among the Auckland firms to form a sort of kauri dealers' association, for regulating the output and controling the supply of the article; and it is also thought that in the present session of the New England Parliament a bill may be promoted to subject the collection of kauri to certain restrictions. During the present year very large quantities of kauri have been placed on the Auckland market, in March alone no less than 600 tons arrived there, and in April over 400 tons, causing prices to recede, although at the end of April a slight improvement had occurred. A fire took place at a gum store on March 7, by which about £2,000 worth of kauri was destroyed. A comparison of the kauri prices in New Zealand and in London does not quite bear out the complaint of the exporters, that the values are no longer remunerative; for while at the end of April poor to best ordinary kauri was quoted at Auckland at 30s to 45s per cwt, and East Coast at 57s to 59s per cwt, the prices obtained at public auction in London a month later ranged from 45s for very common brown to 93s for fine bold well scraped; while selected kauri realized as much as 157s 6d per cwt. Allowing for freight, charges, and difference in quality after grading in London, this margin seems a fairly wide one. The kauri pine is not found outside a limited area in New Zealand, and a combination of dealers controling the supply would, therefore, possess all the elements of success. The resin obtainable from the living tree, *Dammara australis*, is much softer and of a less desirable quality than the fossil kauri; besides, the wood of the tree is highly prized as timber, and according to reliable accounts the forest are fast being cut down, so that in all probability our supplies will remain limited to fossil kauri.—*Chemist and Druggist.*

Analysis of the Leaves of Tussilago Farfara, Lin.

BY CHARLES S. BONDURANT, PH. G.

The leaves were carefully freed from the long petioles and other extraneous matter. On account of their tomentose character considerable trouble was experienced in reducing them to No. 80 powder. Moisture determined in a portion of the air-dried drug amounted to 7·8 per cent. This may include a small percentage of volatile oil which was also present.

Fifty grams (50 gm.) were taken for analysis. Complete exhaustion with petroleum spirit yielded 2·18 per cent solid matter at 100 deg. C. On increasing the temperature to 110 deg. C. an acrid volatile oil was driven off in small quantity. The residue after driving off volatile oil, yielded nothing to distilled water. Boiled with absolute alcohol, the solution, on cooling, deposited a small amount of waxy matter of low melting point. Caustic potash was added to the alcoholic solution and after boiling, diluting and acidifying, a small portion separated insoluble in water, showing presence of a small amount of resinous matter. That portion of the petroleum extract, insoluble in absolute alcohol, was caoutchouc, soluble in chloroform, bisulphide carbon and ether, not saponified with strong solution of potassa.

The residue of the original 50 gm. was next macerated with stronger ether until exhausted with that solvent, which extracted 2·63 per cent solid matter sparingly soluble in distilled water, to which it imparted an intense bitter taste. This aqueous solution contained no tannin, and gave no reaction for alkaloids, but was found to readily reduce Fehling's solution after boiling with dilute hydrochloric acid and neutralizing, thus giving evidence of a glucoside. After evaporating this aqueous solution on a water bath to a small bulk and placing this over sulphuric acid for several days, a white amorphous solid had separated, quite bitter and inodorous, but on boiling with dilute sulphuric acid, a strong odor, similar to that of wetted leather, was evolved. Thus decomposed and neutralized, the liquid reduced Fehling's solution.

That portion of the ethereal extract insoluble in water was treated with hot absolute alcohol which failed to dissolve the whole of the residue. The alcoholic solution filtered and poured into a large quantity of acidulated water, separated a dark brown-reddish resin, which, on drying, became brittle, dark red with concentrated sulphuric acid, whitish on the addition of water, and was soluble in concentrated solution of caustic potash. That portion insoluble in boiling absolute alcohol was found to be caoutchouc which had escaped extraction with petroleum spirit.

The residue, after exhaustion with stronger ether, was macerated for 24 hours with absolute alcohol and filtered. On evaporation an extract remained which amounted to 3·28 per cent., the greater portion of which was soluble in distilled water. The aqueous solution was free from alkaloids, with ferric chloride showed evidences of tannin, and with neutral lead acetate yielded a precipitate containing 2·64 per per cent. of organic matter, while gelatin and alum precipitated 2·42 per cent., the difference being probably gallic acid.

The small portion not dissolved by distilled water from the alcoholic extract was found to be resinous and similar in character to that obtained in the ethereal extract.

The petroleum spirits, ethereal and alcoholic extracts were strongly colored green by the chlorophyll present in the leaves. The solutions were distinctly green by transmitted and dark red by reflected light.

The residue from the alcoholic treatment was dried and macerated with distilled water during 24 hours, then filtered and made up to known volume by passing distilled water through the filter. The extracted matter amounted to 11·22 per cent. The aqueous solution, treated with 2 vols. of absolute alcohol precipitated 3·42 per cent. of mucilage; the filtrate concentrated and treated with 4 vols. of absolute alcohol deposited 6·23 per cent. of dextrin and allied carbohydrates, and the filtrate from this on evaporation yielded saponin, insoluble in absolute alcohol, soluble in chloroform, turning purple with concentrated sulphuric acid and yielding frothing solutions with water.

The residue of the powdered leaves left after treatment with water was next treated with a 0·2 per cent. solution of caustic soda, the filtrate slightly acidified with acetic acid, and mixed with 3 volumes of 95 per cent. alcohol the precipitate was dried at 100 degrees C., weighed, incinerated, and after deducting the ash, gave 6·21 per cent. albuminous matter present.

The residue of the leaves not dissolved by caustic soda was treated with dilute hydrochloric acid, the filtrate neutralized with ammonia, the precipitate dried, and incinerated to calcium oxide, and calculated to calcium oxalate, amounting to 1·26 per cent.

The residue of the 50 gm. of powder, on being treated with distilled water and chlorine gas, lost 19·42 per cent. of lignin and incrusting substances, the dried residue of 28·43 per cent. constituting cellulose.

A qualitative examination was made of the ash weighing 17·10 per cent. of the powdered leaves; it contained potassium, calcium, magnesium, iron and aluminium, chlorides, phosphates, carbonates and silicates.—*Am. Journal of Pharmacy.*

WITHDRAWALS FROM BOND.

Week ending July 12, 1887.

Acid citric kgs	20
Aniline colors, pgs	111
Bay rum, pgs	35
Bronze powder, cs	2
Cement, cks	200
Chemical comp, cks	8
Corks, bls	80
Glass plate, cs	3
Glue, bbls	7
Glycerine, pgs	30
Guarana, cs	6
Lemon peel, cs	25
Licorice paste, bxs	65
Lead, pigs	1552
Magnesia carb, pgs	33
Matches, cs	13
Musk, cs	1
Oil olive, bbls	26
Opium, cs	6
Orange mineral, cks	10
Orange peel, cs	5
Perfume, cs	2
Potash chlo, kgs	80
Saltpeter, bgs	572
Soap castile, cs	100
Soda caustic, dms	20
Sponge, bls	54
Vanilline, pgs	1

TOTAL DOMESTIC RECEIPTS

FOR WEEK ENDING JULY 11, 1887.

		For 6 days.	Since Jan 1
Alcohol	bbls.	938	24790
Ashes	pkgs.	73	1259
Beeswax	pkgs.	25	705
Borax	cks.	—	97382
	bbls.	—	1392
China clay	cks	36	2531
Cottonseed	bags	—	23580
Meal	bgs.	—	24271
Cake	bgs.	—	11600
Soap Stock	bbls.	643	1816
Flaxseed	buah.	32350	146339
Grease	pkgs.	720	17662
High Wines	bbls.	1095	32468
Hops	bls.	569	13153
Lead	pigs.	8570	79786
Mustard seed	bgs.	—	53586
Oil, Cottonseed	bbls.	991	55644
Lard	bbls.	5	2369
Linseed	bbls.	—	1450
Lubricating	bbls.	130	13130
Cake	bags.	10066	264272
Oleo stock	pkgs.	1797	45085
Pitch	bbls.	—	466
Quicksilver	flks.	—	4474
Rosin	bbls.	16006	168706
Stearine	pkgs.	425	11575
Sumac	bags	—	14109
Tallow	pgs.	1013	38174
Tar	bbls.	605	15795
Turpentine, crude	bbls	10	1170
Spirits	bbls.	6187	5144

NEW YORK DOMESTIC RECEIPTS

ALCOHOL—861 bbls J A Webb, Penn RR
75 bbls, G W Kidd & Co, D L & W RR
ASPHALT—103 bbls, J S Lampson, str N O
ASHES—60 bbls, We ch H & C, H R RR
8 pkgs, order, H R RR
2 pkgs, order, Erie RR
8 pgs, various, H R RR
BEESWAX—1 pkg, Belt & B, str Savannah
1 pkg, J K Cilley & Co, str Richmond
5 pkgs, order, str Richmond
4 pkgs, order, str Charleston
6 pkgs, forward, str Wilmington
4 pkgs, Plum & G, str Savannah
2 pgs, Belt & B, str, Charleston
2 pgs, Belt & B, str, Richmond
CLAY—24 cks, Sergeant Bros, str Port Royal
12 cks, R McNamee & Co, str, Charleston
FLAXSEED—4400 bush, J A Dean & Co, L V RR
5500 bush, order, L V RR
19000 bush, various, canal boat
3850 bush, various, Erie RR
6600 bush, J A Dean & Co, Penn RR
GLUE—100 bbls, A J Marcus, str New Orleans
GREASE—179 pgs, order, N R boats
58 pkgs, order, Erie RR
250 pkgs, N K Fairbank & Co, Penn RR
40 pkgs, Fayerweather & L, B & O RR
8 pkgs, order, Penn RR
126 pkgs, Davis Oil Co, B & O RR
55 pkgs, A W Harris, Balt Inland
HIGH WINES—155 bbls, J L Hasbrouck, Penn RR
130 bbls, Ross & K, D, L & W RR
75 bbls, W S Gray, D, L & W RR
75 bbls, Ross & K, Penn RR
210 bbls, J Griffith & Co, Penn RR
75 bbls, H & H Reiners, Penn RR
150 bbls, G W Kidd & Co, Penn RR
225 bbls, T B Kerr, Penn RR
HOPS—194 bls, P Weilbacher, str, N O
6 bls, Pier Bros, N R boats
18 bls, order, H R RR
2 bls, order, Penn RR
19 bls, N F Howe, Vt C RR
53 bls, S & F Uhlman, H R RR
8 bls, S & F Uhlman, N Y, O & W RR
8 bbls, S & F Uhlman, D L & W RR
25 bls, J J & W Brown, D, L & W RR
2 bls, order, N R boats
21 bls, A S, N R boats
8 bls, E Wattenburg, D, L & W RR
8 bls, V Loewi, N Y, W S & B RR
30 bls, Pier Bros, N Y, O & W RR
28 bls, order, N Y, O & W RR
29 bls, T K Sharp, N R boats
20 bls, Rossiter & S, D, L & W RR
90 bls, Lilienthal Bros, str, N O
LEAD—4361 pigs, N Corwith & Co, str, Richm'd
1638 pigs, Bradley W L Co, str, Richmond
700 pigs, Leroy S & L Co, str, Richmond
805 pigs, Pope & Bros, str, Richmond
383 pigs, Behr & S, Erie RR
304 pigs, order, D, L & W RR
380 pigs, order, Erie RR
OIL COTTONSEED—105 bbls, order, str, N O
42 bbls, Simmonds & G, str, Fernandina
300 bbls, Hopkins, D & Co, str, Richmond
117 bbls, order, str, Galveston
80 bbls, Hopkins, D & Co, str, Charleston
80 bbls, O F Waring, Penn RR
28 bbls, order, N R boats
184 bbls, W J Bowers & Co, str, N O
55 bbls, order, Erie RR
LARD—5 bbls, order, Balto Inland Line
LUB—55 bbls, order, L V RR
75 bbls, O F Waring, Penn RR
OIL CAKE—400 bgs, Simmonds & G, Erie RR
3731 bgs, I & C Moore & Co, Erie RR
1990 bgs, A B Gibbs, canal boat
400 bgs, Simmonds & G, D L & W RR
1472 bgs, various, canal boats
300 bgs, I & C Moore & Co, B & O RR
1359 bgs, Simmonds & G, H R RR
103 pgs, order, Erie RR
207 bgs, I & C Moore & Co, H R RR
OLEO STOCK—100 pkgs, H O Armour & Co, Penn RR
195 pkgs, order, Hudson River RR
550 pkgs, R S Barri, N Y N S & B RR
780 pkgs, H Loeb, H R RR
65 pkgs, order, Hudson River RR
107 pgs, R C Coleman, Penn RR
ROSIN—792 bbls, G Potter & Co, str, Brunswick
498 bbls, forward, str, Savannah
50 bbls, order, str, Savannah
150 bbls, Patterson D & Co, str, Savannah
300 bbls, G Teideman, str, Savannah
2464 bbls, Z Mills, sch, Georgetown
4411 bbls, G Potter & Co, sch, Georgetown
415 bbls, W H Wiggins, sch, Georgetown
326 bbls, G W Bailey & Co, sch Georgetown
2784 bbls, Tolar H & Co, sch Georgetown
332 bbls, G W Bailey & Co, str Richmond
350 bbls, Paterson D & Co, str, Richmond
51 bbls, Murchison & Co: str Richmond
330 bbls, J Turtons Sons, str Savannah
570 bbls, Colgate & Co, str, Savannah
200 bbls, Murchison & Co, str, Savannah
337 bbls, G Potter & Co, str, Charleston
427 bbls, M W Larendon, str, Charleston
00 bbls, forward, str, Charleston
139 bbls, W H Wiggins, str, Charleston
127 bbls, forward, str, Wilmington
284 bbls, Tolar H & Co, str, Wilmington
190 bbls, G W Bailey & Co, str, Savannah
19 bbls, Tolar H & Co, str, Richmond
170 bbls, Dutton & W, str, Savannah
SOAP—238 bbls, W J Bowers & Co, str, Rich
STOCK—162 bbls, W J Bowers & Co, str, Rich
166 bbls, R M Orig, str, Richmond
315 bbls, order, str, Richmond
STARCH—3301 pgs, various, H R RR
2150 pgs, order, H R RR
605 pgs, order, Erie RR
1434 pgs, order, D, L & W RR
STEARINE—350 pgs, Fairbank & Co, Erie RR
75 tcs, Pool & M, Penn RR
TALLOW—40 pgs, order, str, Georgetown
193 pgs, order, N R boats
61 pgs, order, H R RR
60 pgs, G B Ferris, Penn RR
108 pgs, G Vandenhove, Penn RR
140 pgs, G Vandentove, D, L & W RR
60 pgs, H W Calef, D, L & W RR
9 pgs, D S Brown, D, L & W RR
10 pgs, order, N J C RR
37 pgs, H W Calef, str, Richmond
3 pgs, order, L V RR
11 pgs, C S Higgins, L V RR
9 pgs, order, D, L & W RR
110 pgs, order, Penn RR
50 pgs, G Vandenhove, N Y, W S & B RR
5 pgs, order, Erie RR
10 pgs, B T Babbitt, Penn RR
55 pgs, Colgate & Co, Penn RR
34 pgs, R T Van Iderstine, C RR of N J
TAR—350 bbls, order, str, Wilmington
150 bbls, forward, str, Wilmington
50 bbls, Z Mills, sch, Georgetown
5 bbls, Z Mills, str, Richmond
TURPENTINE SPIRITS—200 bbls, order, str, Brunswick
230 bbls, G Potter & Co, str, Brunswick
400 bbls, Pratt Mfg Co, str, Savannah
35 bbls, order, str, Savannah
550 bbls, forward, str, Savannah
509 bbls, Z Mills, sch, Georgetown
1123 bbls, G Potter & Co, sch, Georgetown
146 bbls, W H Wiggins, sch, Georgetown
767 bbls, Tolar, H & Co, sch, Georgetown
21 bbls, G W Bailey & Co, sch, Georgetown
223 bbls, G W Bailey, str, Richmond
435 bbls, Tolar, H & Co, str, Richmond
440 bbls, F W Blossom, str, Savannah
121 bbls, J Turton's Sons, str, Savannah
28 bbls, G Potter & Co, str, Charleston
8 bbls, G W Bailey & Co, str, Charleston
31 Tolar, H & Co, str, Charleston
26 bbls, Z Mills, str, Charleston
250 bbls, Paterson, D & Co, str, Charleston
43 bbls, W H Wiggins, str, Charleston
5 bbls, forward, str, Wilmington
100 bbls, Paterson, D & Co, str, Wilmington
60 bbls, T Fenner & Co, str, Wilmington
72 bbls, Tolar, H & Co, str, Wilmington
223 bbls, order, str, str, Wilmington
5 bbls, T M Robinson & Co, str, Richmond
30 bbls, W R Winn, sch, Georgetown
80 bbls, Dutton & W, str, Savannah
17 bbls, Murchison & Co, str, Richmond
CRUDE—10 bbls, forward, str, Wilmington

BOSTON DOMESTIC RECEIPTS

GREASE—133 bbls, Boston & Albany RR
14 bbls, Old Colony RR
83 bbls, New York & New England RR
113 bbls, by sea
9 bbls, Fitchburg RR
32 bbls, Boston & Maine RR
5 bbls, B & P RR
TALLOW—36 bbls, 1 pg, Boston & Maine RR
19 bbls, Boston & Lowell RR
35 bbls, 9 cks, Old Colony RR
21 bbls, Fitchburg RR
1 bbl, Boston & Albany RR
48 hhds, Boston & Providence RR
5 bbls, 8 hhds, by sea
12 bbls, N Y & N E RR

WILMINGTON DOMESTIC RECEIPTS

ROSIN—2945 bbls, inland
TAR—192 bbls, inland
TURPENTINE SPIRITS—1572 cks, inland
CRUDE—490 bbls, inland

NEW ORLEANS DOMESTIC RECEIPTS.

ALCOHOL—5 bbls, 10 hf bbls, Ill Central RR
BEESWAX—1 sk, Tex & Pacific RR
BONES—7 sks, Thibodaux
21 sks, St Martinsville
1 car, Tex & Pacific RR
CANDLES—622 bxs, Ill Central RR
CEMENT—13 bbls, N O & Northeastern RR
COTTONSEED—8 cars, L, N O & Tex RR
116 sks, Washington
2355 sks, Greenville
2476 sks, Shreveport
16 sks, Bosco Belle
2640 sks, Vicksburg
MEAL—10 cars, L, N O & Tex RR
GLUCOSE—1 car, L, N O & Tex RR
42 bbls, St Louis
50 bbls, L & Nashville RR
LEAD—322 kgs, St Louis
WHITE—891 kgs, St Louis
LIME—7 cars, Louisville & Nashville RR
1 car, L, N O & Texas RR
800 bbls, Louisville
NAPHTHA—1 car, L, N O & Texas RR
OIL—185 bbls, St Louis
20 bbls, Southern Pacific RR
3 cars, N O & Northeastern RR
3 cars, L, N O & Texas RR
1 car, Ill Central RR
50 bbls, St Martinsville
CAKE—2 cars, Southern Pacific RR
8 cars, L, N O & Texas RR
ROSIN—163 bbls, Springfield
198 bbls, N O & Northeastern RR
SOAP—730 bxs, Ill Central RR
STOCK—52 bbls, St Martinsville
STARCH—1500 bxs, Ill Central RR
1000 bxs, 3 cars, Louisville & Nashville RR
TALLOW—5 bbls, Texas & Pacific RR
TURPENTINE SP—35 bbls, Springfield

CHARLESTON DOMESTIC RECEIPTS

CLAY—118 cks, South Carolina RR
LIME—1 car, Charleston & Savannah RR
ROSIN—125 bbls, Northeastern RR
243 bbls, Charleston & Savannah RR
1313 bbls, South Carolina RR
TURPENTINE SPIRITS—573 cks, N E RR
90 cks, Charleston & Savannah RR
2 tanks, 607 cks, South Carolina RR

SAVANNAH DOMESTIC RECEIPTS

CLAY—24 cks, Central RR
LIME—370 bbls, Central RR
OIL—2 cars, Charleston & Savannah RR
CARBON—65 bbls, Central RR
COTTONSEED—8 bbls, Central RR
PAINT—3 bbls, Central RR
2 bbls, Savannah, Florida & Western RR
ROSIN—708 bbls, Hershmans Lake
2052 bbls, Central RR
234 bbls, Charleston & Savannah RR
8867 bbls, Savannah, Florida & Western RR
TURPENTINE SPIRITS—48 bbls, Hershmans Lake
757 bbls, Central RR
248 bbls, Charleston & Savannah RR
38 8 bbls, Savannah, Florida & Western RR
WAX—18 bbls, Central RR

EXPORTS FROM NEW YORK FOR THE PAST WEEK.

ACID

8 cbys $63 Colon, Aspinwall

ACID ACETIC

1 kg $10 Alene, Savanilla

ACID MURIATIC

1 cby $4 Ozama, San Domingo

ACID STEARIC

25131 lbs $2500 C of Washington, Mexico

ACID SULPHURIC

9 cbys $35 C of Para, Aspinwall
6 cbys $24 Barracouta, Windward Islands
50 cbys $173 Elcho, Georgetown
1 cby $4 Ozama, San Domingo

ALCOHOL

2710 gls $949 Richmond Hill, London
5559 gls $3640 P de Coninck, Antwerp

AMMONIA

10 dms $1897 Denmark, London

ANILINE DYES

343 lbs $275 B Yglesias, Havana

ANISEED

21 bgs $559 Alene, Savanilla

ANTIMONY ORE

100000 lbs $2250 Richmond Hill, London

ASPHALT

4 bbls $31 Taormina, Hamburg

ASPHALTUM

8391 lbs $1030 Polaria, Hamburg

BARK

1000 bgs $1200 La Gascogne, Havre

BONE BLACK

2 bbls $17 Portia, Halifax, N S

BORAX

400 lbs $29 B Yglesias, Vera Cruz

CANDLES

120 bxs $388 N Shipman, Pto Plata
15 bxs $50 Claribel, Port Limon
18 bxs $53 C of Para, Aspinwall
50 bxs $153 Adria, Halifax, N S
10 bxs $45 C of Washington, Mexico
50 bxs $100 A Bradshaw, Pt au Prince
125 bxs $140 Eva, Surinam
7 bxs $11 L Bannerman, Abaco
144 bxs $182 Alene, Savanilla
10 bxs $18 Alene, Kingston
4 bxs $5 Colon, Aspinwall
10 bxs $16 Victory, Nassau
9 bxs $79 Ozama, San Domingo

CASSIA

257 lbs $12 N Shipman, Pto Plata

CEMENT

90 pgs $630 Claribel, Port Limon
50 bbls $113 C of Para, Aspinwall
20 bbls $55 C of Washington, Mexico
175 bbls $280 Cienfuegos, Havana
200 bbls $420 M Culmer, Aspinwall
10 bbls $30 A Bradshaw, Pt au Prince
4 bbls $11 L Bannerman, Abaco
10 bbls $31 C Moore, Macoris

CHALK

10 bbls $14 Cienfuegos, Havana

CINNAMON

202 lbs $50 C of Washington, Mexico

CLOVES

280 lbs $43 B Yglesias, Vera Cruz
271 lbs $64 Valencia, Pto Cabello
521 lbs $128 C of Washington, Mexico

CORKS

2 bls $15 C of Puebla, Havana

COTTONSEED

68750 lbs $3438 Aurania, Liverpool

CUMMIN SEED

6 bgs $105 Alene, Savanilla

DRUGS

1 cs $883 Nevada, Liverpool

EXTRACT DYEWOOD

12322 lbs $612 Greece, London
7327 lbs $296 Furnessia, Glasgow
19651 lbs $576 England, Liverpool

EXTRACT FUSTIC

120 lbs $13 B Yglesias, Vera Cruz

EXTRACT LOGWOOD

680 lbs $56 B Yglesias Vera Cruz
10065 lbs $703 P de Coninck, Antwerp
32000 lbs $2279 Polaria, Hamburg
5000 lbs $350 De Ruyter, Antwerp

EXTRACT ROOTS

50 cs $2500 Aurania, Liverpool

FERTILIZER

2 bbls $11 H Darling, Nassau
11 bbls $66 Victory, Nassau

FLAVINE

2500 lbs $175 P de Coninck, Antwerp

FLORIDA WATER

45 doz $87 Cardenas, Monrovia
113 doz $51 Germanic, Liverpool
8 doz $22 Alene, Savanilla
12 doz $34 C of Para, Aspinwall
30 doz $87 Barracouta, Windward I
50 doz $121 C of Washington, Mexico
100 doz $275 Eva, Surinam
12 doz $29 Thornhill, Progresso
50 doz $132 Alene, Kingston
27 doz $75 Colon, Aspinwall

GLASS PLATE

1 cs, $40 C of Washington, Mexico

GLASS WINDOW

1 cs $85 C of Para, Aspinwall
5 cs $14 Colon, Aspinwall

GLUE

5 bbls $122 Cienfuegos, Havana

GLYCERINE

2 cs $24 Alene, Savanilla

GREASE

71 lbs $10 C Margeaux, Bordeaux
411 lbs $159 C of Washington, Mexico
1099 lbs $40 Gothia, Stettin
107810 lbs $3773 La Gascogne, Havre
98253 lbs $3207 Taormina, Hamburg
2 560 lbs $575 Br Queen, Liverpool
35734 lbs $536 Niagara, Havana
493 lbs $19 Colon, Aspinwall

GUM CHICLE

20 cs $326 Aurania, Liverpool
20 cs $427 Adriatic, L'pool

GUM SENEGAL

400 lbs $120 Colon, Aspinwall

INDIGO

389 lbs $60 J Johnson, Rosario

LAMPBLACK

2 bbls $6 C of Para, Aspinwall

LICORICE ROOT

1000 lbs $75 Adriatic, L'pool

LIME

5 bbls $27 Alene, Greytown

LIME ACETATE

56774 lbs $1025 St Ronans, Liverpool
28015 lbs $732 Furnessia, Glasgow
413 bgs $1035 St Ronans, L'pool
59978 lbs $1391 De Ruyter, Antwerp

LUBRICATING GREASE

1990 lbs $90 Claribel, Port Limon
1188 lbs $250 Aurania, Liverpool

MANDRAKE ROOT

2287 lbs $91 Aurania, Liverpool

MATCHES

4 cs $20 M M Dyer, Bluefields
5 cs $47 C of Para, Aspinwall
31 cs $502 Barracouta, Windward I
20 cs $250 Eva, Surinam
26 cs $226 Alene, Greytown
7 cs $96 Alene, Savanilla
4 cs $40 H Darling, Nassau
2 cs $5 Victory, Nassau
1 cs $6 Ozama, San Domingo

OIL ALMOND

2 cs $74 Alene, Greytown

OIL ANISE

1 cs 165 C of Para, Aspinwall

OIL CAKE

247985 lbs $2729 Germanic, Liverpool
1088949 lbs $12994 Martello, Hull
655072 lbs $11377 Greece, London
907012 lbs $11674 Richmond Hill, London
229494 lbs $2925 Furnessia, Glasgow
394433 lbs $7502 Denmark, London
951524 lbs $10433 Buffalo, Hull
1703814 lbs $20148 Worcester, Avonmouth
458865 lbs $5420 Helvetia, London
241100 lbs $2650 S of Georgia, Glasgow

OIL CASTOR

10 cs $59 C of Para, Aspinwall
1 cs $40 C of Washington, Mexico
1 cs $18 Alene, Greytown

OIL COCOANUT

1 bbl $31 Alene, Savanilla

OIL COD

20 pgs $900 Allianca, Brazil

OIL CODLIVER

27 pgs $747 C of Washington, Mexico
2 cs $25 A Bradshaw, Port au Prince
5 cs $38 Alene, Savanilla
1 cs $9 Thornhill, Progreso
10 cs $150 Colon, Aspinwall

OIL COTTONSEED

2650 gls $900 S of Penna, Glasgow
186 gls $74 Barracouta, Windward I
52 gls $49 C of Washington, Mexico
50 gls $26 E Godden, Kingston
180 gls $104 Denmark, London
500 gls $298 Thornhill, Progreso
379 gls $175 Alene, Kingston
16 gls $10 Ozama, San Domingo

OIL ESSENTIAL
2 cs $62 C of Para, Aspinwall

OIL FISH
7436 gls $1804 Hammonia, Hamburg
37 gls $17 B Yglesias, Vera Cruz
30 gls $30 C of Washington, Mexico
15 gls $8 Alene, Savanilla
60 gls $40 Ozama, San Domingo

OIL LARD
1193 gls $540 Greece, London
250 gls $150 Claribel, Port Limon
110 gls $64 C of Para, Aspinwall
49 gls $27 Barracouta, Windward I
95 gls $57 Alliance, Brazil
3750 gls $1735 La Gascogne, Havre
3364 gls $1785 La Normandie, Havre
260 gls $153 Belgenland, Antwerp
199 gls $115 A Bradshaw Port au Prince
1291 gls $674 Helvetia, London
864 gls $467 Eicho, Georgetown
2616 gls $1200 England, Liverpool

OIL LINSEED
30 gls $30 M M Dyer, Bluefields
40 gls $24 B Yglesias, Vera Cruz
100 gls $75 Claribel, Port Limon
238 gls $138 C of Para, Aspinwall
44 gls $22 C of Washington, Mexico
104 gls $54 L Bannerman, Abaco
60 gls $40 Alene, Greytown
96 gls $50 Alene, Savanilla
10 gls $6 Alene, Kingston
20 gls $11 Colon, Aspinwall
50 gls $26 H Darling, Nassau
50 gls $26 Victory, Nassau
40 gls $22 Ozama, San Domingo

OIL LUBRICATING
450 gls $270 C Margeaux, Bordeaux
65887 gls $13400 St Ronans, L'pool
674 gls $200 Monte Rosa, Dundee
505 gls $76 England, L'pool
256 gls $96 Claribel, Port Limon
910 gls $388 C of Para, Aspinwall
15201 gls $2484 Richmond Hill, London
500 gls $250 Alliance, Brazil
4987 gls $800 Jersey City, Bristol
19353 gls $3300 Furnessia, Glasgow
31980 gls $7500 La Gascogne, Havre
10262 gls $1745 Newcastle City, Newcastle
1782 gls $744 Polaria, Hamburg
2414 gls $175 Belgenland, Antwerp
12437 gls $4770 Hammonia, Hamburg
300 gls $170 Alene, Savanilla
60053 gls $13750 England, Liverpool
189 gls $37 Colon, Aspinwall
650 gls $370 J Balcom, Colastine
20 gls $4 Ozama, San Domingo
54 gls $27 Ozama, San Domingo

OIL MACHINE
1 cs $5 C of Para, Aspinwall
3 cs $14 Alliance, Brazil
2 cs $21 Cienfuegos, Havana
1 cs $18 Runer, Montevideo
6 cs $14 Alene, Greytown
1 cs $3 Alene, Kingston

OIL MEAL
106250 lbs $1800 America, Bridgetown
21500 lbs $407 Barracouta, Windward I
250 0 lbs $40 Rising Sun, Bridgetown
6875 lbs $ 70 Thames, Trinidad
12500 bgs $200 Daylight, Port Spain

OIL MENHADEN
28759 gls $5000 Furnessia, Glasgow

OIL OLEO
113850 lbs $11385 P Caland, Rotterdam
17296 lbs $1557 Furnessia, Glasgow
34891 lbs $3156 Polaria, Hamburg
420717 lbs $40009 Edam, Amsterdam
70501 lbs $6801 Hammonia, Hamburg

OIL PALM
18800 gls $4230 St Ronans, L'pool
354 lbs $25 Claribel, Port Limon

OIL PEPPERMINT
10 cs $768 Aurania, Liverpool

OIL VEGETABLE
256 gls $119 Hammonia, Hamburg

OIL ROSIN
1250 gls $140 Werra, Buenos Ayres

OIL SPERM
765 gls $551 S of Penna, Glasgow

OIL WHALE
40 gls $30 Colon, Aspinwall
51 gls $26 C Moore, Macoris

PAINT
3 pgs $16 M M Dyer, Bluefields
5 pgs $57 Cardenas, Gaboon
13 pgs $275 B Yglesias, Vera Cruz
44 pgs $355 C of Para, Aspinwall
1 pg $10 Barracouta, Windward I
2 pgs $28 C of Washington, Mexico
1 bbl $25 Alliance, Brazil
8 bbls $95 Cienfuegos, Havana
5 cs $35 Worcester, Avonmouth
50 cs $675 Santiago, Hull
1 cs $10, Runer, Montevideo
19 pgs $233 Alene, Greytown
14 pgs $91 Alene, Savanilla
2 bbls $80 Thornhill, Progreso
4 bbls $48 Alene, Kinston
2 cs $12 Colon, Aspinwall
1 cs $4 Ozama, San Domingo
20 kgs $15 Ozama, Cape Hayti

PALM KERNELS
1570 bush $1570 St Ronans, Liverpool

PARAFFINE WAX
119498 lbs $3700 Monte Rosa, Leith
56281 lbs $1839 Julia, Cork
2130 bbls $54000 Richmond Hill, London
392473 lbs $28471 Denmark, London
8150 lbs $500 British Queen, Liverpool
90544 lbs $3020 Hammonia, Hamburg

PEARL ASH
2619 lbs $200 Edam, Amsterdam

PEPPER
4 bgs $75 N Shipman, Pto Plata
2 bgs $16 C of Para, Aspinwall
20 bgs $231 C of Washington, Mexico
2 bgs $50 A Bradshaw, Port au Prince
21 bgs $18 Thornhill, Progreso
2 bgs $30 Ozama, San Domingo

PETROLINA
2 cs $14 Denmark, London

PHOSPHOROUS AMORPH
164 lbs $182 B Yglesia, Vera Cruz

PIMENTO
4 bgs $27 N Shipman, Pto Plata

PITCH
100 bbls $134 St James, Yokohama

POTASH
153 lbs $16 C of Washington, Mexico
841 lbs $70 J Johnson, Rosario
10 cs $93 Colon, Aspinwall

POTASH CHLO
2000 lbs $162 B Yglesias, Vera Cruz

RED LEAD
4000 lbs $230 C of Para, Aspinwall

ROOTS
17 bls $200 Werra, Pt Chalmers
10 bls $180 C Margeaux, Bordeaux

ROSIN
50 bbls $127 St James, Yokahama
8 bbls, $17 Claribel, Port Limon
64 bbls $328 Richmond Hill, London
50 bbls $104 Rosina, St Johns, N F
200 bbls $500 Taormina, Hamburg
300 bbls $550 Newcastle City, Newcastle
5 bbls $12 Thames, Trinidad
528 bbls $1632 Runer, Montevideo
209 bbls $760 Shetland, Buenos Ayres
100 bbls $180 Ida, Lisbon
103 bbls $197 C Moore, San Domingo

SARSAPARILLA
53819 lbs $5890 Richmond City, London
189 lbs $53 Ems, Bremen

SENEGA ROOT
874 lbs $306 Taormina, Hamburg

SERPENTARIA ROOT
550 lbs $137 La Normandie, Havre

SOAP
10 bxs $32 M M Dyer, Bluefields
502 bxs $270 Cardenas, Monrovia
3 bxs $10 Cardenas, Cape Palmas
5 bxs $29 Cardenas, Gaboon
50 bxs $175 Bassano, Copenhagen
1073 bxs $500 Greece, London
1089 bxs $1756 C of Para, Aspinwall
10 bxs $35 Rosina, St Johns, N F
1 bx $4 Barracouta, Windward I
6 bxs $346 Denmark, London
4 bxs $10 Cienfuegos, Havana
998 bxs $1108 Maranhense, Para
1 bx $33 E Godden, Kingston
75 bxs $132 M Culmer, Aspinwall
7800 bxs $4602 A Bradshaw, Port au Prince
3 bxs $37 Niagara, Havana
10 bxs $28 L Bannerman, Abaco
36 bxs $129 Alene, Greytown
4 bxs $18 Alene, Savanilla
8 bxs $83 Alene, Kingston
541 bxs $557 Colon, Aspinwall
17 bxs $54 Victory, Nassau
6 bxs $18 Ozama, San Domingo
250 bxs $125 Ozama, Cape Hayti

SODA BICARB
1 kg $5 Ozama, San Domingo

SODA CAUSTIC
4 dms $84 Claribel, Port Limon
20 dms $421 B Yglesias, Vera Cruz
4 dms $87 C of Washington, Mexico
2318 lbs $90 Alene, Savanilla
11592 lbs $288 C Moore, San Domingo

SODA SILICATE
4 bbls $42 Claribel, Port Limon
2352 lbs $53 Alena, Savanilla

SODA SAL
3 cks $19 C of Para, Aspinwall
12 cs $45 Colon, Aspinwall
2 cks $8 Victory, Nassau

SPERMACETI
6745 lbs $2680 Greece, London
1333 lbs $561 Taormina, Hamburg
1890 lbs $795 Hammonia, Hamburg

SPONGE
193 lbs $46 B Yglesias, Vera Cruz
172 bls $4150 La Gascogne, Havre
11230 lbs $2990 Denmark, London
660 lbs $680 Umbria, Liverpool
6011 lbs $2150 Edam, Amsterdam
1790 lbs $803 Hammonia, Hamburg

STARCH
1400 bxs $1570 P Caland, Rotterdam
10 bgs $1000 Claribel, Pt Limon
71 pgs $173 Barracouta, Windward I
75 bxs $150 Furnessia, Glasgow
10 bxs $23 E Godden, Kingston
50 cts $250 Denmark, London
300 bxs $360 Runer, Montevideo
20 pgs $139 Thornhill, Progreso
5 pgs $15 Victory, Nassau

STEARINE
39000 lbs $1500 C Margeaux, Bordeaux
5158 lbs $395 Claribel, Pt Limon
5000 lbs $390 C of Para, Aspinwall
180000 lbs $8500 La Gasgogne, Havre
1 bbl $21 Alene, Savanilla
2207 lbs $173 Thornhill, Progreso

TALLOW
90000 lbs $3600 P Caland, Rotterdam
269832 lbs $9234 Martello, Hull
13587 lbs $671 Claribel, Pt Limon
17610 lbs $567 B Yglesias, Vera Cruz
58691 lbs $2333 Germanic, Liverpool
1382 lbs $322 C of Washington, Mexico
69686 lbs $3090 Gothia, Stettin
163484 lbs $6500 La Gasgogne, Havre
52906 lbs $1851 Arabic, Liverpool
61958 lbs $2625 Br Queen, Liverpool
132375 lbs $4627 Hammonia, Hamburg
400 lbs $20 Eva, Surinam
1171 lbs $61 Eicho, Georgetown
256531 lbs $10250 C Margeaux, Bordeaux
111700 lbs $4468 Edam, Amsterdam
2403 lbs $131 Alene, Savanilla
10541 lbs $499 Thornhill, Progreso
132994 lbs $5290 England, Liverpool
175 lbs $13 Alene, Kingston
7259 lbs $495 Colon, Aspinwall
20537 lbs $873 C Moore, San Domingo

TAR
20 bbls $52 C of Puebla, Havana
20 bbls $84 B Yglesias, Havana
4 cs $11 Claribel, Port Limon
3 bbls $7 C of Para, Aspinwall
20 bbls $43 Barracouta, Windward I
6 bbls $18 A Bradshaw, Port au Prince
10 bbls $24 Eicho, Georgetown
10 bbls $31 Alene, Savanilla
4 bbls $12 Thornhill, Progreso
1 bbl $4 Victory, Nassau

TURPENTINE
781 gls $293 C of Puebla, Havana
1000 gls $385 St James, Yokohama
100 gls $62 Claribel, Port Limon
98 gls $35 B Yglesias, Vera Cruz
304 gls $166 C of Para, Aspinwall
260 gls $101 Barracouta, Windward I
100 gls $39 C of Washington, Mexico
40 gls $18 M Culmer, Aspinwall
100 gls $39 Thames, Trinidad
5280 gls $3070 Runer, Montevideo
500 gls $225 Shetland, Buenos Ayres
40 gls $21 Alene, Greytown
116 gls $58 Alene, Savanilla
230 gls $90 Alene, Kingston
72 gls $32 Colon, Aspinwall
300 gls $117 T Balcom, Colastine

VARNISH
93 gls $71 C of Puebla, Havana
2250 gls $1474 St Ronans, Liverpool
230 gls $270 Werra, Yokohama
90 gls $127 Claribel, Port Limon
92 gls $73 B Yglesias, Vera Cruz
50 gls $50 Aurania, Liverpool
70 gls $145 C of Para, Aspinwall
9 gls $11 Orinoco, Hamilton
45 gls $38 C of Washington, Mexico
337 gls $106 Alene, Savanilla
15 gls $14 Alene, Kingston
10 gls $7 J Balcom, Colastine

VASELINE
1 cs $10 C of Puebla, Havana
194 cs $7445 Richmond Hill, London
5 cs $190 Geiser, Copenhagen
10 cs $375 Arabic, Liverpool
1 cs $50 C of Para, Aspinwall
1 cs $40 Niagara, Havana

WAX
1080 lbs $49 B Yglesias, Vera Cruz

WHITE LEAD
3000 lbs $190 C of Para, Aspinwall
300 lbs $12 Santiago, Nassau
225 lbs $23 Alene, Greytown
160 lbs $8 Colon, Aspinwall

WHITING
6 bbls $12 C of Puebla, Havana
3 bbls $10 Cienfuegos, Havana

ZINC OXIDE
250 lbs $14 B Yglesias, Vera Cruz
1000 lbs $800 C of Para, Aspinwall
150 lbs $9 L Bannerman, Abaco

New York to San Francisco.

Per Am str Colon, via Aspinwall, cleared July 11
Canary Seed—20 bgs, $195
Cummin Seed—1 bl, $20
Dyewood—175 bbls, $629
Glycerine—50 dms, $12,174
Paint—20 pgs, $496

Savannah Exports.

TURPENTINE SP
1174 bbls, Ellida, Bristol

Boston Exports

AMMONIA
2 cbys, Yarmouth, Yarmouth

BARK EXT
5 bbls, New York, Hull

BEESWAX
2 tcs, 6 bbls, New York, Hull

DYESTUFFS
1 bx, New Brunswick, Annapolis
100 bbls, New York, Hull

GREASE
200 hhds, Roman, Liverpool

LOGWOOD
78 bgs, Edward, Sackville

OCHER
2 bbls, Haytien Republic, Haytien pts

OIL
9 bbls' Alice S, Dorchester
50 cs, E A Warner, Cayenne
12 bbls, Worcester, Halifax, etc
2 cs, Haytien Republic, Haytien pts

OIL LUBRICATING
bbls Carroll, Halifax etc

OIL SALAD
20 bbls, Roman, Liverpool

PAINT
1 bx, New Brunswick, Annappolis
50 cs, New York, Hull
4 cs, Worcester, Halifax, etc
23 cs, Bothnia, Liverpool

SOAP
4 cs, Pavonia, Liverpool
300 bxs, Haytien Republic, Haytien pts

STEARINE
100 hhds, Roman, Liverpool

TALLOW
35 hhds, Pavonia, Liverpool
276 hhds, Roman, Liverpool

SUMAC
14 bgs, Worcester, Halifax, etc

New Orleans Exports.

1 car, L & N RR

SOAP
14 bxs, J Oteri, Bluefields

San Francisco Exports.

BONE MEAL
120000 lbs Forest Queen, Honolulu

CANDLES
92 bxs, Australia, Honolulu
15 bxs, G W Elder, Victoria

CEMENT
100 bbls, Ella. Honolulu

GINSENG
2903 lbs, Belgic, China

GLASS
140 bbls, Belgic, China

GREASE LUB
4 pgs, G W Elder, Victoria

HOPS
90 lbs, Australia, Honolulu
50 lbs, G W Elder, Victoria
150 lbs, Belgic, China

LIME
50 bbls, Forest Queen, Honolulu
100 bbls, Ella, Honolulu
200 bbls, Iron Crag, Honolulu

OIL MACHINE
700 gls, Forest Queen, Honolulu

OIL VARIOUS
5 cs, 5500 gls, Golden Fleece, Apia
5 cs, San Juan, Central America
18 pgs, San Juan, In transit
1 cs, G W Elder, Victoria

PAINTS
5 pgs, Golden Fleece, Apia
97 pgs, Australia, Honolulu
24 pgs, G W Elder, Victoria

PLASTER
10 bbls, G W Elder, Victoria

SOAP
32 bxs, Australia, Honolulu
25 bxs, Forest Queen, Honolulu
41 pgs, Ella, Honolulu
50 bxs, Golden Fleece, Apia
300 bxs, Belgic, Japan

STARCH
28 pgs, G W Elder, Victoria

WHITE LEAD
500 lbs, Golden Fleece, Apia

Philadelphia Exports.

BARK EXT
25 bbls British King, Liverpool

OIL CAKE
700 bgs, British King, Liverpool

TALLOW
175 hhds British King, Liverpool

Baltimore Exports.

BARK QUERCITRON.
288 bgs, Main, Bremen
200 bgs Nessmore, Liverpool
200 bgs, Marco Minghetti, Marseilles

BARK EXTRACTS
200 bxs, Peruvian, Liverpool
450 bxs, Main, Bremen

OIL CAKE
3104 scks, Peruvian, Liverpool
1300 scks, St Mark, Bristol
546560 lbs, Scotsman, Rotterdam

ROSIN
500 bbls, Peruvian, Liverpoo
604 bbls, Ripon City, London
600 bbls, Main, Bremen
412 bbls, Wetherby, Glasgow

Departure of Steamers.

FROM NEW YORK.

Steamers.	Sails.	Destination
Egypt	July 13	Liverpool
Rhyniand	July 13	Antwerp
Trave	July 13	Bremen
State of Nevada	July 14	Glasgow
Bohemia	July 14	Hamburg
Rotterdam	July 16	Rotterdam
Ethiopia	July 16	Glasgow
Servia	July 16	Liverpool
City of Chester	July 16	Liverpool
Fulda	July 16	Bremen
La Bretagne	July 16	Havre
Alaska	July 19	Liverpool
Philadelphia	July 20	La Guayra
Westernland	July 20	Antwerp
Spain	July 20	Liverpool

Gellert	July 21	Hamburg
State of Indiana	July 21	Glasgow
Zaandam	July 23	Amsterdam
Aguan	July 30	Belize
Arizona	Aug 2	Liverpool
Waesland	Aug 3	Antwerp
Lessing	Aug 4	Hamburg
Amalfi	Aug 6	Hamburg

FROM BOSTON.

Cephalonia	July 14	Liverpool
Kansas	July 19	Liverpool
Scythia	July 21	Liverpool
Berderer	July 25	London
Norseman	July 26	Liverpool
Catalonia	July 28	Liverpool

FROM PHILADELPHIA.

British King	July 13	Liverpool
Manitoban	July 15	Glasgow
Lord Clive	July 20	Liverpool
British Prince	July 27	Liverpool
British Princess	Aug 3	Liverpool
Indiana	Aug 10	Liverpool

FROM BALTIMORE.

Rhein	July 13	Bremen
Mareca	July 13	Antwerp
Donau	July 20	Bremen
Nova Scotian	July 23	Liverpool
Peruvian	Aug 9	Liverpool

FROM SAN FRANCISCO.

City of Sydney	July 23	Yokohama, etc
Mariposa	July 30	Honolulu, etc
Oceanic	Aug 3	Yokohama, etc
Zealandia	Aug 27	H'n'l'u & Sydney

Baltimore Imports.

Comparative statement of the Imports at the port of Baltimore commencing January 1st 1887 and 1886.

ARTICLES:	This week.	Previously.	Same time '86
Agricultural salt, tons	....	9765	14836
Cement, casks	....	10898	4710
Brims'ne & Sulph'r tns	..	6695	7730
Guano, tons	280	3364	4017
Nitrate of Soda, bgs	....	32495	11628
Spirits Turp, bbls	778	11709	12605
Rosin, bbls	1947	74701	39600
Tar, bbls	110	2909	2575

Baltimore Exports.

Principal articles exported from Baltimore to foreign countries since 1st of January, 1887, and compared with same time 1886.

	This week	Previously.	Same time '86
Bark Quercitron bgs	1388	16886	20611
Spirits Turpentine, gals	....	4000	4000
Rosin, bbls	2428	23028	15695
Oil Cake, pkgs	4800	93355	46804
Petroleum, gls	396781	3917389	7988900
Tallow, lbs	67115	7314528	3396120

Values of Imports at Boston.

For the week ended July 1, 1887.

	Value.
Glass	$18209
Chemicals	34139
Olive oil	946
Paints	660
Glue stock	732
Plaster	200
Cod oil	183
Fustic	869
Logwood	13655

Values of Exports from Boston.

For the week ended July 1, 1887.

	Value.
Bones and hoofs	$300
Candles	48
Drugs & Chemicals	9520
Grease	17376
Hops	56
Lime and cement	515
Oil cake	5839
Naval Stores—	
Rosin and turpentine	510
Tar and pitch	410
Oils—	
Refined petroleum	20962
Lard	5075
Lubricating	202
Paints	1144
Soap	560
Tallow	10873
Stearine	3638

TOTAL PACKAGES AND VALUES OF IMPORTS,

As returned by the Custom House for the week ending July 8, 1887:—

	Quantity	Value
Glass, plate	343	$22913
Glass, window	13719	19296
Looking glass plate	178	29553
Annatto	40	240
Asphalt	....	4524
Arsenic	1712	14993
Acid, carbolic	117	2389
Acid, citric	341	1211
Acid, oxalic	15	1165
Acid, all other	60	7635
Aniline colors	708	52951
Ammonia, carbonate	24	1183
Ammonia, muriate of	87	1699
Ammonia, sal	20	1925
Argols	429	74214
Albumen	59	3439
Alizarine	79	5701
Balsam copaiba	43	971
Bark, cinchona	115	1053
Bark other	33	183
Bay rum	5	250
Bleaching powder	477	7567
Brimstone	..	8802
Bronze powder	....	3359
Borax	5	61
Butter, cocoa	44	2579
Chalk	...	71
Chemical salts	75	962
Cinchonidia	25	998
Cochineal	38	1414
Cobalt	5	750
Colocynth	11	399
Cudbear	2	90
Cuttlefish bone	10	90
Dextrine	950	5373
Dyewood extract	152	4823
Fish sounds	5	1210
Flowers, arnica	31	410
Flowers chamomile	6	229
Flowers saffron	1	368
Fullers earth	1444	1164
Gambier	4912	44780
Gelatin	114	6592
Glucose	413	2265
Glycerine	141	13391
Guinea grains	18	80
Gum arabic	40	3570
Gum aloes	322	2387
Gum benjamin	12	915
Gum copal	611	8183
Gum camphor	500	10909
Gum gamboge	3	242
Gum, licorice	50	1244
Gum olibanum	63	587
Gum shellac	802	13997
Gum senegal	18	1444
Gum substitute	10	170
Gum, other	7	419
Glue	316	10671
Insect powder	245	8981
Indigo	20	7645
Indigo carmine	5	758
Indigo, extract of	55	1730
Indigo sub	8	270
Iodine	2	3790
Laurel leaves	50	494
Leeches	6	110
Magnesia	40	486
Manuring salt	....	10565
Mica	2	730
Morphine	2	31
Myrabolans, ext of	25	322
Oro illa liquor	49	3671
Oxide of zinc	9	108
Oxide uranium	6	1390
Oil, amber	18	372
Oil, aniline	44	6158
Oil, almonds	1	3
Oil, bergamot	50	2000
Oil, castor	300	1526
Oil, citronella	40	6124
Oil, cocoanut	370	31602
Oil, fish	75	1396
Oil, Haarlem	50	263
Oil, juniper	3	67
Oil, lavender	6	763
Oil, laurel	13	98
Oil, lemon	146	5346
Oil, myrbane	4	371
Oil, orange	55	1900
Oil, olive	1681	8343
Oil, palm	41	2199
Oil, tanners	30	442
Oil, thyme	2	137
Oil, other essential	15	1377
Oil, all other	28	513
Opium	7	5743
Paints, unspecified	....	5577
Paints, chrome yellow	11	642
Paints, colcothar	128	515
Paints, drop black	40	168
Paints, iron oxide	93	434
Paints, ocher	10	85
Paints, orange mineral	72	2215
Paints, rose pink	20	269
Paints, sienna	134	1141
Paints, Tuscan red	5	26
Paints, umber	10	45
Paints, van dyke brown	10	28
Paints, Venetian red	411	1108
Paints, white lead	75	3649
Pitch	24	924
Potash, chlorate	135	1725
Potash, hydrate	54	2048
Potash, prussiate	9	1272
Persian berries carmine of	13	734
Phosphorus	30	1761
Plumbago	2810	33531
Quinine	62	14728
Quicksilver	100	3032
Regulus antimony	242	10766
Root, licorice	2753	10346
Root, orris	1	38
Root, sarsaparilla	46	1548
Roots, valerian	10	80
Root, all other	196	2954
Saltpeter	1077	5770
Senna	30	1785
Sizing	3	36
Soda ash	1762	35118
Soda, arseniate of	20	459
Soda, bicarb	102	960
Soda, carbonate	140	488
Soda, caustic	1079	12319
Soda hypo of	96	204
Soda, nitrate	8123	31988
Soda sal	266	590
Soda sulphate	93	996
Sponges	380	5810
Sumac	125	1206
Sumac, extract of	50	934
Sugar of milk	13	496
Talc	39	7295
Turmeric	50	145
Ultramarine	25	845
Vanilla beans	2	397
Varnish	21	1625
Venice turpentine	60	1833
Verdigris	2	341
Other drugs	....	14941
Bismuth	8	4063
Dutch metal	18	3068
Lead, pigs	4812	17676
Cassia	230	2800
Cinnamon	2	58
Chillies	267	4101
Cloves	201	5829
Clove stems	100	438
Ginger	24	382
Mace	285	10188
Nutmegs	484	28286
Pepper	3891	70844
Empty barrels	....	15104
Fustic	....	646
Logwood, M lbs	2380	20077
Brushes	....	5779
Candles	....	362
Clay	....	6782
Carbon	....	36
Corks	....	1598
Cocoa, preparations of	26	913
Emery	....	1112
Hops	523	21519
Musk	1	535
Plaster	....	3820
Portland cement	13463	12991
Perfumery	37	3536
Seed, annatto	100	641
Seed, anise	32	382
Seed, caraway	40	300
Seed, cardamoms	13	854
Seed coriander	118	566
Seed, mustard	2944	16259
Seed, rape	153	785
Linseed	6913	25146
Soap	74	5383
Soap, castile	91	862
Soap stock	213	2286
Stone, rotten	...	940
Tapioca	1711	8911

GOODS ON THE WAY TO THE UNITED STATES

Auckland

TO NEW YORK

Heinrich Bauer, 475 tons kauri gum

Calcutta

TO NEW YORK

Sam Skolfield, 2000 bgs cutch, 5000 bgs linseed, 550 cs shellac, 157 cs indigo, 450 cs castor oil, 500 bgs ginger

Loch Carron, 1878 bgs saltpeter, 889 bgs cutch, 150 cs shellac

Glendon, 696 bgs saltpeter, 2150 bxs cutch, 3512 bgs cutch, 7500 bgs linseed, 47 cs indigo

Fannie Skolfield, 1985 bgs cutch

L J Morse, 487 bgs saltpeter, 3985 bgs cutch, 4000 bgs linseed, 520 cs shellac

San Joaquin, 2500 bgs cutch, 100 cs castor oil

Centennial, 1155 bgs saltpeter

Steamers via London May 4 to May 17, 300 cs shellac, 25 cs indigo, 39 cs talc

Andola, 672 bgs saltpeter, 10000 bgs linseed, 222 cs shellac, 100 cs buttonlac

Parameta, 1042 bgs saltpeter, 475 bxs cutch, 3791 bgs cutch, 2500 bgs linseed, 330 cs shellac, 87 cs indigo, 100 cs buttonlac, 50 cs castor oil, 250 bgs turmeric, 400 bgs myrabolams

TO SAN FRANCISCO

Scottish Minstrel, 150 cs shellac

Colombo

TO NEW YORK

Johann Carl, 1100 cwt cl. cocoa, 1593 cwt plumbago, 198060 ozs citronella oil

Girgenti

TO CHARLESTON

Rosa, 650 tons brimstone thirds

Hiogo

TO NEW YORK

Frank Stafford, 2922 pcls camphor

Ismir, 510 pcls camphor

Haligerda, 30 cs Japan wax, 310 pls camphor

Hong Kong

TO NEW YORK

Edward Kidder, 2150 pgs cassia, 390 bxs ginger, 340 cs essential oils, 530 bxs cassia buds, 250 bxs gall nuts.

Professor Mohn, 400 cs cassia buds, 371 pgs cassia, 325 cs essential oils, 210 cs galls

Leghorn

TO NEW YORK

Giuseppi Costagliola, 750 bxs white soap

TO PHILADELPHIA

Consiglio Galatola, 850 bxs white soap

Licata

TO CHARLESTON

Gaspare, 600 tons brimstone seconds

Lisbon

TO NEW YORK

Giulio, 1012 bls corkwood

TO PHILADELPHIA

Sunbeam, 2041 bls corkwood

Macassar

TO NEW YORK

Hasselrodder, 1675 pls gum copal

Manila

TO NEW YORK

Emelie L Boyd, 150 q q indigo

Singapore

TO NEW YORK

Glenfyle, 423 pls black pepper, 50 pls nutmegs and mace

Wm McGilvery, 12595 pls gambier, 189 pls cube gambier, 2976 pls pearl tapioca, 630 pls sago flour, 168 pls white pepper, 3243 pls black pepper, 1307 pls gum copal, 50 pls nutmegs, 120 cs essential oil, 40 cs citronella oil

TO BOSTON

Wildwood, 10000 pls gambier, 497 pls cube gambier, 838 pls sago flour, 1009 pls pearl tapioca, 1933 pls black pepper, 252 pls flake tapioca 50 pls nutmegs, 250 pls gum copal

Smyrna

TO NEW YORK

Irene, 1300 bls licorice root, 200 tons emery stone

West Coast South America

TO HAMPTON ROADS

E L Shaw, 6500 bgs nitrate soda

Sultana, 9000 bgs nitrate soda

J V Troop, 15000 bgs nitrate soda

E T Crowell, 10000 bgs nitrate soda

TO BOSTON

Sea King, 15000 bgs nitrate soda

Innerwick, 12000 bgs nitrate soda

Magellan, 10000 bgs nitrate soda

E L Pettingill, 9000 bgs nitrate soda

TO NEW YORK

Jennie Harkness, 13000 bgs nitrate soda

Grace Deering, 6500 bgs nitrate soda

Edmonton, 11000 bgs nitrate soda

Vauban, 7800 bgs nitrate soda

Mohican, 8000 bgs nitrate soda

Haddon Hall, 14000 bgs nitrate soda

Carl Hendric, 10000 bgs nitrate soda

Mabel, 8000 bgs nitrate soda

John Gill, 10000 bgs nitrate soda

E L Mayberry, 6000 bgs nitrate soda

Daniel Barnes, 14000 bgs nitrate soda

J Harkness, 14000 bgs nitrate soda

M Henning, 6000 bgs nitrate soda

TO PHILADELPHIA

Forest, 7800 bgs nitrate soda

Itonus, 9200 bgs nitrate soda

Onaway, 9000 bgs nitrate soda

Maria Margarita, 8000 bgs nitrate soda

TO BALTIMORE

Lottie Moore, 8500 bgs nitrate soda

TO CHARLESTON

Chas Fobes, 5000 bgs nitrate soda

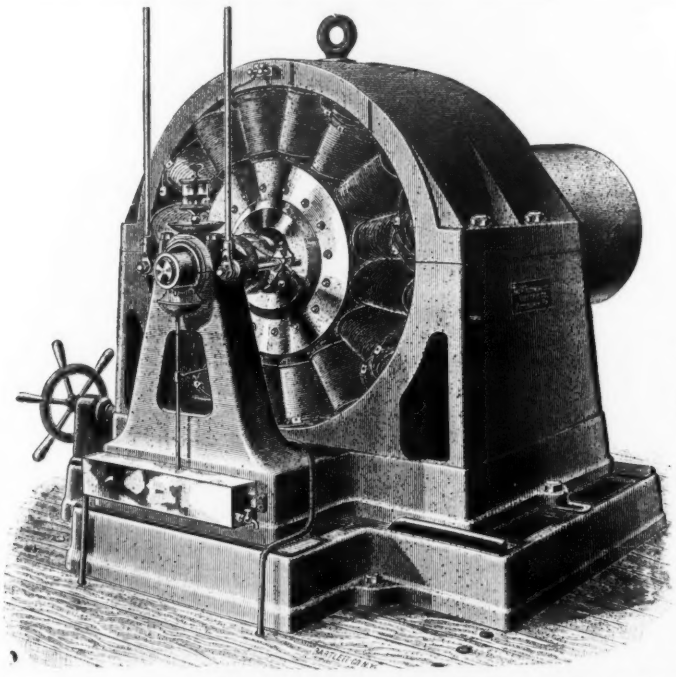
RECORD OF VESSELS.

PORT & NAME.	SAILED	LAST REPORTED
Auckland.		
H Bauer	May 30	
Calcutta.		
Sam Skolfield	March 28	
S Minstrel	Feb 12	March
Loch Carron	April 1	
Glendon	April 10	
F Skolfield	April 5	May 2
L J Morse	April 11	
San Joaquin	April 11	
Centennial	April 13	
Andola	May 4	
Parameta	May 6	
Colombo.		
Johann Carl	March 28	
Girgenti.		
Rosa	May 10	
Hiogo.		
F Stafford	March 25	
Ismir	March 27	
Haligerda	April 20	
Hong Kong.		
E Kidder	March 31	New Anjer, April 24
P Mohn	April 21	
Leghorn.		
G Costagliola	May 16	
C Galatola	May 5	Tarifa, May 17
Licata.		
Gaspare	May 27	
Lisbon.		
Giulio	June 1	
Sunbeam	June 3	
Macassar.		
Hasselrodder	March 11	
Manila.		
E L Boyd	March 1	New Anjer, April 1
Singapore.		
Glenfyle	Feb 16	
W McGilvery	April 6	
Wildwood	May 3	
Smyrna.		
Irene	May 19	
W. C. South America		
W Mudgett	March 2	
J Harkness	April 27	
Itonus	April 10	
T Baker	April 11	
G Deering		Loading
Onaway	April 18	
Forest	April 15	
Sea King		Loading
Edmonton		Loading
Vauban	Mch 8	Valparaiso, Apr 24
L Barry	Jan 19	Valparaiso, Feb 20
Mohican	April 19	
H Hall		Loading
C Hendric		Loading
E L Shaw	May 6	
L Moore		Loading
Sultana		Loading
Chas Fobes		Loading
Innerwick		Loading
J V Troop		Loading
M Margarita		Loading
J Gill		Loading
E L Mayberry		Loading
D Barnes		Loading
E T Crowell		Loading
Mabel		Loading

Westinghouse, Church, Kerr & Co.,

Contracting and Consulting Engineers,

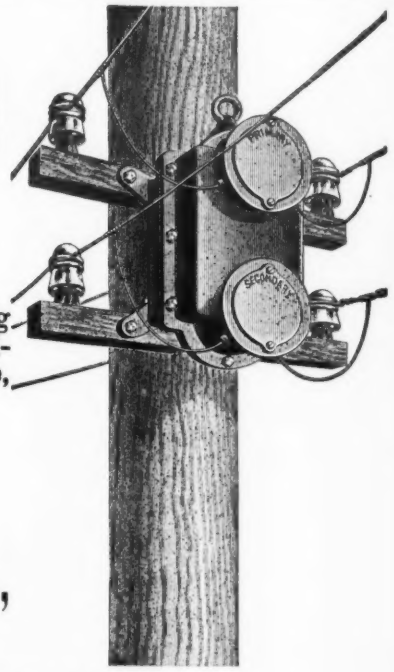
17 Cortlandt Street, New York. Hamilton Building, Pittsburgh, Pa.



THE

ALTERNATING SYSTEM.

Incandescent Electric Lighting from Central Stations, made Universal, Economical and Profitable, irrespective of distance.



The Westinghouse Electric Co.,

PITTSBURGH, PA.

Eastern Office, 17 CORTLANDT STREET, NEW YORK.

MURPHY IRON WORKS,

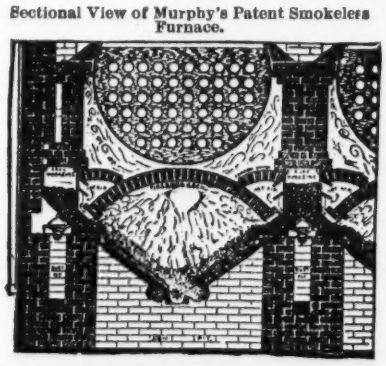
DETROIT, MICHIGAN,

SOLE MANUFACTURERS OF THE

Murphy Patent Smokeless Furnace

Is guaranteed to be a perfect Smoke Preventor and to give a large Economy ove any Furnace in use. Specially adapted for Slack Coal.

Sectional View of Murphy's Patent Smokeless Furnace.



JOHN V. LEWIS & CO., OILS, CINCINNATI, February 1, 1883.

Murphy's Iron Works, Detroit, Mich.:

GENTLEMEN.—We take pleasure in recommending your patent Smokeless Furnaces. When properly operated they are entirely smokeless, and success. We herewith give you an extract from our books, showing economy for two consecutive months—October and November, 1881. With the old style of setting under two boilers our fuel bills were $706; for the corresponding months in 1882, with the Murphy furnace under the same boilers, our fuel bills were $481. We did somewhere from 10 to 15 per cent. more service in October and November, 1882, than in the corresponding months of 1881. The above shows a saving of $225, without reckoning the greater duty performed. We shall be pleased to answer any inquiry you may send us, or show your patent furnaces in operation to any one desiring to see them. Yours very truly,

JOHN V. LEWIS & CO.

NORTON MILLING CO., MADISON STREET BRIDGE, CHICAGO, June 28, 1883.

To whom it may concern:

We have had the "Murphy Furnace" in operation about two years under two boilers 65" x 16'. After a very careful test, and after trying and discontinuing the use of three or four other furnaces, we have no hesitation in stating that for simplicity, durability, economy, and the perfect combustion of smoke, the "Murphy Furnace" is preferable to any we know of, and believe it to be the best furnace in use at present.

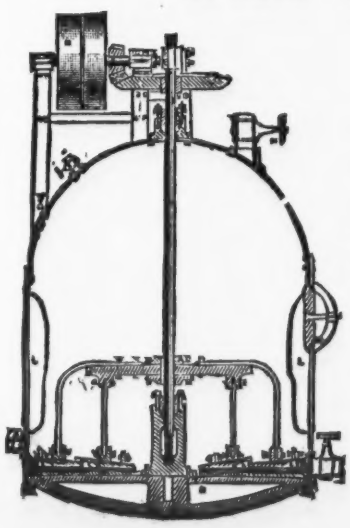
THE NORTON MILLING CO., EDMUND NORTON, Manager.

Prices and Descriptive Pamphlets can be had upon application. **Correspondence solicited**

The Meech Gold and Silver Ore

Disintegrating Machine.

The Only Method for Preparing the Ore for Amalgamation.



Disintegrating, Decomposing and Desulphurizing the ore under a HIGH TEMPERATURE and PRESSURE OF STEAM HEAT, with chemical action and attrition, dissolves and breaks up the chemical combination in the ores, individualizing, cleaning and separating the atoms of metal from the gangue, perfectly freeing them for amalgamation in combination with the MEECH AMALGAMATION MACHINE and process, (being the greatest combination of Amalgamation known,) will successfully extract 90 per cent. of the metal from rebellious ores, such as Sulphurets, Sulphates, Sulphides, Chlorides, Bromides, Oxides, Tellurides, &c.

☞ We desire business correspondence with every mining district in the United States. ☜

THE MEECH CRUSHER AND PULVERIZER.

This Machine will **CRUSH AND PULVERIZE GOLD AND SILVER ORES** to 20, 40 and 60 mesh fine, and from 20, 40 and 60 tons **per day.** The **principles** of this machine, making it superior to all others, are the peculiar concave and convex shape of the jaws, with concave and convex projections, which breaks, crumbles, stamps and pulverizes the ore with less power, wear and tear, than any other machine.

MEECH & CO., Cleveland, Ohio.

We will contract to erect the **Meech Plant for Mining Machinery** for successfully treating all grades of gold and silver ore.

NAVAL STORES.

Having representatives in the primary markets, we will be glad to name prices for

SPIRITS TURPENTINE

AND ALL GRADES OF

ROSINS

Deliverable in any of the Southern and Western Markets.

STANDARD OIL COMPANY,

LOUISVILLE, KY.

WATERS PIERCE OIL CO..

REFINERS OF

PETROLEUM,

Manufacturers of CAR and AXLE GREASE.

PRINCIPAL OFFICE.

No. 600 North Fourth St., St. Louis, Mo., U.S.A.

Depots in all Towns in the SOUTHWEST and OLD MEXICO.

The Standard Lubricating Oil of America

FOR RAILROADS.

Galena Engine, Coach and Car Oil,

Gravity 26°, 27°, 28°, 29°; Cold Test, 10° to 15° deg. below zero.

No freezing in coldest weather, and entire freedom from hot journals at any time; perfect uniformity at all seasons of the year. Saves forty per cent. in wear of brasses, as its exclusive use upon a majority of the leading railroads has demonstrated,

SHOWING BETTER RESULTS THAN ANY OIL EXTANT.

REFERENCE FURNISHED ON APPLICATION.

GALENA OIL WORKS, Limited

CHAS. MILLER,
Pres't and Gen'l Manager.

FRANKLIN PA

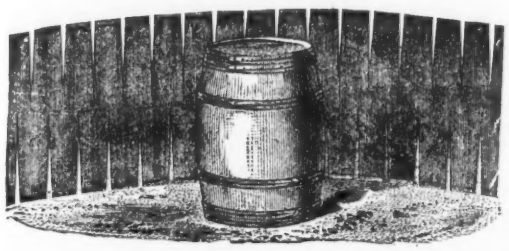
HUGO MATTULLATH, *President.* CHAS. E. COTTRELL, *V. Prest. and Treasurer.* CASS G. ROBINSON, *Secretary.*

ANCHOR MAN'F'G. CO.

ONE STAVE BARREL TRADE MARK

DETROIT, MICH.

MANUFACTURERS OF



One Stave Barrel,

KILN DRIED HEADING

—AND—

COOPERAGE SUPPLIES.

Works at Anchorville, Mich.

Office, 44 & 45 Buhl Block, Detroit, Mich.

ADDRESS ALL LETTERS TO DETROIT

FOR

COTTONSEED OIL MILLS,

Rice Mills, Sugar Houses

Distilleries, Phosphate and Fertilizing Works,

Elevators, Malt Kiln Floors, Grain Dryers, Threshers, Separators, Corn Shellers and all kinds of Grain Cleaning Machinery; also for Mining and Concentrating Works; Coal, Coke and Ore Screens; Gas and Water Works; Paper, Woolen, Flour and Oil Mills; Filters, Strainers, Ventilators, Extractors, etc Heavy Steel and Iron Plates and Cylinders for Screening Ore, Coal, Stone Phosphates, etc. Revolving Screens, Round and Hexagon. Grizzlies for Placer Mining. Stamp Battero Screens of all Kinds and Sizes. Mining Screens for all kinds of Ores. Special attention given to work for Railroads and Car Builders. Perforated Tin and Brass of all sizes. Iron, Steel, Copper, Brass and Zinc punched to any size and Thickness required.

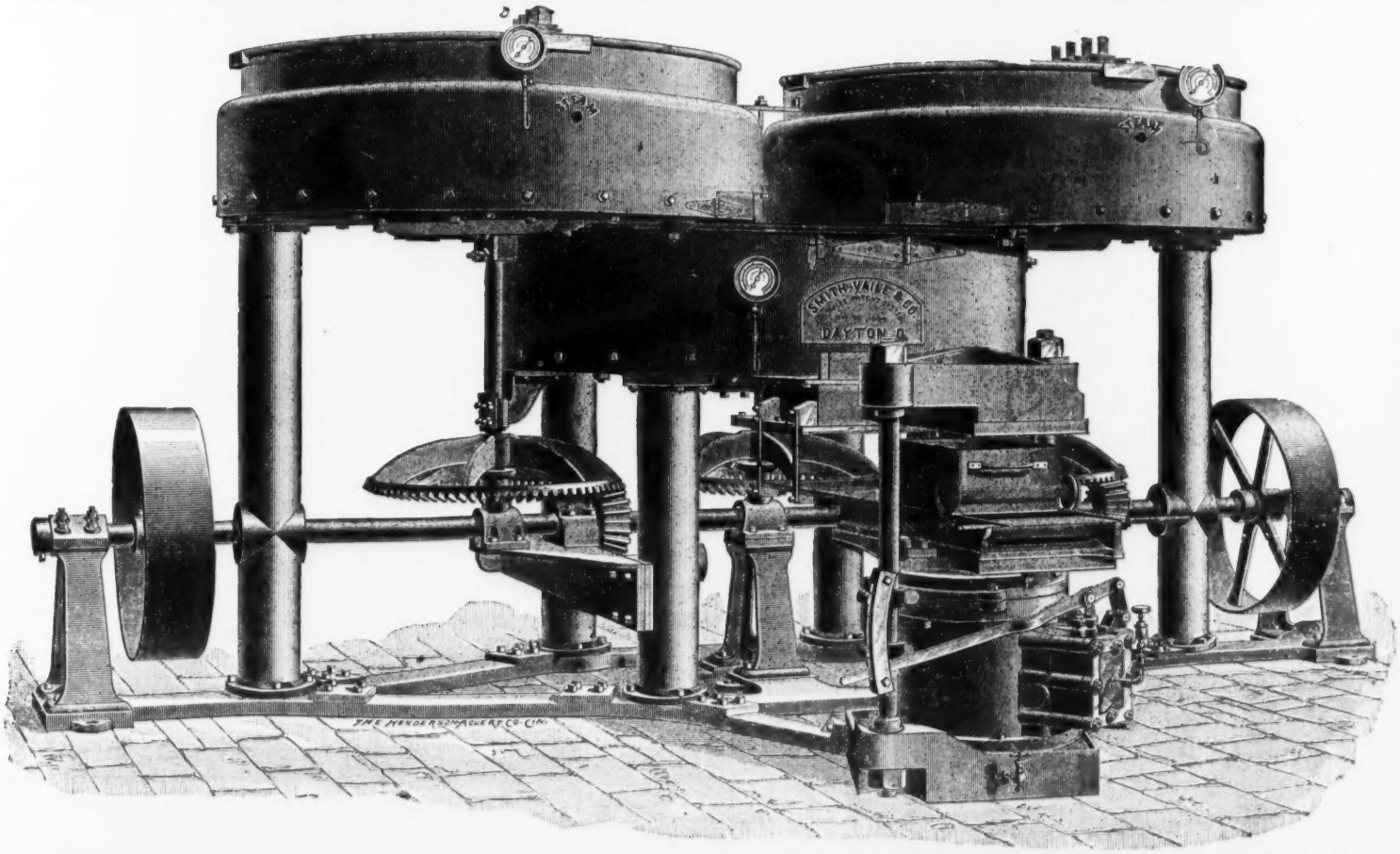
Correspondence Solicited. Satisfaction Guaranteed.

THE HARRINGTON & KING PERFORATING CO.

Main Office and Works,

224 & 226 North Union St., Chicago.

OIL MILL MACHINERY A SPECIALTY.



OUR IMPROVED CHILLED CRUSHER ROLLS

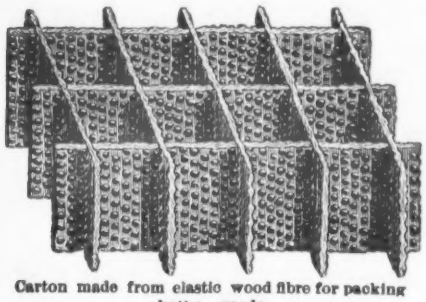
Of Three Four or Five Rolls to a Stack, for

COTTON AND LINSEED Guaranteed the most Complete Machines in this market

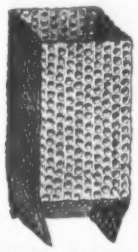
Also Improved Presses, Steam Cake Formers, Triple Combination Heaters, Hydraulic Pressure Pumps, Cottonseed Hullers.

Photographs sent upon Application. Correspondence Solicited.

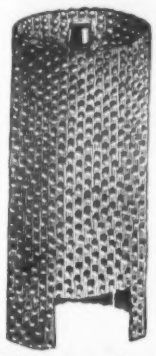
THE SMITH & VAILE CO. DAYTON, O.



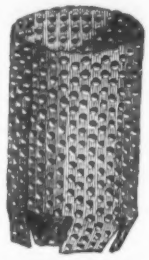
Carton made from elastic wood fibre for packing bottle goods.



Sewed Wrapper. Flexible bottom; will fit a round or square bottle.



Will fit a round or square bottle.



ewed Wrapper Flexible bottom; will fit a square or round bottle.

Roll of elastic wood fibre for packing bottled goods

THE INDENTED PAPER CO.,

The Wood Fibre Packing has been used by some of the largest shippers in the U. S. Sent all over the world and not a single complaint of breakage has been reported. It is absolutely safe.

Send for sample and catalogue.

MOXIE CO.,
ATLANTA, - - GA.,
SOLE AGENTS OF.
Georgia, Tennessee, Texas, Alabama, Mississippi and Louisiania.

Sole Manufacturers under U. S. Patents of

The Elastic Wood Fibre Paper

For Packing Bottled Merchandise, Tiles, and all Fragile Articles.

Put up in any shape desired by the packer or sold by the yard or roll. In plain cylinder with a sheet for the top and bottom of the box. In sewed wrappers with flexible bottoms. In cartons. In rack cases to fit a packing box. In self-sealing wrappers, neatly folded in a sheet or wrapping paper for single packages.

These goods are fully protected by Letters Patent and all customers are guaranteed in their use. Sample boxes will be re-packed and re-shipped without expense to the owners.

The special attention of Druggists, Manufacturers of Essential Oils, Fancy Paints, Flavoring Extracts and all packers of bottled goods and fragile articles is called to this packing.

It is neat, clean, compact, and saves from 30 to 50 per cent. on cost of freight.

Send for sample and catalogue.

Address all correspondence to
Principal Office, 280 Broadway.
NEW YORK.
W. A. SIMMONS
Treas. and General Manager.

MILWAUKEE MALT EXTRACT CO.,

SOLE MANUFACTURERS OF

Milwaukee Malt Extract.

The **Only Malt** Extract Containing Carbonic Gas and Free from Alcohol.

An Absolutely Pure Extract of Barley Malt and Bohemian Hops, Unfermented, Therefore Free from Alcohol.

(All other Malt Extracts contain Alcohol.)

It is especially adapted for administration to patients suffering from nervous exhaustion, feebleness, indigestion, malnutrition, anæmia; also the best article produced for nursing mothers and children. It is very pleasant to the taste. Will keep in any climate if not allowed to freeze.

The diastase contained in our Malt Extract, together with the carbonic gas, renders starchy food immediately soluble by converting the starch into malt sugar and dextrine, in which form they can be readily assimilated by the system, thus creating animal heat and aiding the formation of fat. It is of great aid during lactation, as it increases the amount of sugar and phosphates in the milk, thereby nourishing the infant and supplying strength to the mother.

It will also be found of great value in cases of consumptive tendencies and in the latter stages of phthisis, as it will improve the appetite and assimilate the food, supply the waste of elementary matter and enable the system to resist the effects of the disease. It also acts as a roborant in all cases of debility and is a most valuable addition to the tonic and restorative treatment required in convalescence.

PRICE, 25 CENTS.

Manufactured under Letters Patent of Sept. 26, 1882, July 8, 1884, April 28, 1885, by the

Milwaukee Malt Extract Co.,

Factory and Office, - - KENOSHA, WIS.

For Sale by all Wholesale and Retail Druggists.

CHICAGO DEPOT, - - PETER VAN SCHAACK & SONS.

P. P. P.

34 S. Paca Street, (Heiser Building,)

BALTIMORE, MD.

☞The P. P. PACKAGE (Patent Postal Package has been highly approved by the Post Office Department at Washington, and each Package bears the following approval of Jno. Jameson, Esq., Superintendent of Railway Mail Service :

POST OFFICE DEPARTMENT,
Office of the General Superintendent of the Railway Mail Service,
WASHINGTON, D. C., July 26, 1886.

JAMES B. ANDREWS, ESQ., Baltimore, Maryland.

I have *carefully examined* your Package, which consists of a glass bottle, surrounded by a thick sheathing of blotting paper, and enclosed in a tin box with a screw lid, with rubber cushion, making the box water-tight. This tin box is enclosed in a wooden block.

The Package conforms *in all respects* to the requirements of the Department, and is suitable for the transmission of liquids in the mails.

Very respectfully,
JNO. JAMESON, *General Superintendent.*

We would advise you to ascertain what packages have *been approved* before taking any risk.

The Packages manufactured by the POSTAL PACKAGE COMPANY are specially made with a view to protect the contents from injury through breakage from rough handling or other causes.

It is the only Patent Postal Package that is absolutely safe, and if the bottle is properly corked when filled, parties may feel assured that it will arrive at destination in perfect condition.

☞We manufacture regular sizes, 1-4 ounce, 1-2 ounce, 1 ounce, 3 ounce and 4 ounce Packages. We furnish without bottle or with bottle complete, ready for mailing. Our bottle is the regular sample shape, made of *clear white glass* and especially adapted for samples. We can furnish special sizes to order for any shape bottle,

All descriptions of Mail Packages made to order. *Beware of Infringements.*

☞Send for Price List.

~~DRUG~~ MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on pages 49 and 50.

TUESDAY EVENING, July 12, 1887.

While usually at this time of the year dealers ook for a dull market, the present season is a notable exception, the demand keeping up remarkably well, despite the warm weather and other tendencies to dullness. Mail orders continue to be numerous, and local buyers are still making addition to their stocks, but there is very little speculative interest manifested, except in one or two leading staples, and even these for the time being are somewhat neglected. The general tone of the market is one of firmness, though the changes occurring within the week have been mostly in a downward direction. The principal fluctuations are recorded below:

ADVANCED.	DECLINED
Colocynth apples	Alcohol
Quicksilver	English citric acid
Valencia saffron	Glycerine
	Balsam copaiba
	Balsam fir
	Cubeb berries
	Camphor

Opium.

The opium market has settled down from the feverish and excited condition into which it had been worked at the date of our last to a more quiet but equally firm tone. During the past few days there has been less disposition shown to operate on a large scale by the speculative buyer, but the presence of orders from Smyrna has had the effect of giving the market a buoyancy which it might otherwise have lacked. Holders have placed their limit for the present at $4 75, though some of them might be induced to accept $4 70 on a large parcel. The jobbing demand has shown less activity, as consumers having secured pretty full supplies are evidently holding off to await further developments. In broken packages a light business has been done at $4 75@4 80 and these were the quotations at the close. Regarding the crop situation Messrs. St. John Bros. in a circular issued this morning quote from recent letters to prove the situation in the growing districts is fully as bad as previously depicted. One of these letters dated from Carahissar, June 4th, says: "Having visited the interior and the neighborhood of this town, and comparing last year's opium crop with this, I find but ten per cent; and, if I am not mistaken, up to time of crop five per cent more will be annihilated. As to the harvest they fear there will be nothing left to be gathered. This information is correct as far as our Sandjak is concerned, which is to be pitied. At Konia there is nothing." Other extracts are equally indicative of a short crop. Powdered opium is quoted by some holders at $6 but $5 90 will still buy though the market is very strong and tending upward.

Speculative interest in morphine has been renewed, though the prices bid are generally below holders' views. It is reported that $3 50 has been bid and refused, though it would seem that little difficulty would be experienced in securing stock at that figure. The general quotation of outside holders is $3 55@3 60 or 5@10c premium on the manufacturers' prices. The agents of Smith's Scotch opium has advanced his prices to $3 00 in bulk, $3 05 in ounces and $3 20 in eighths, reporting a fair demand at these figures. The American manufacturers report trade as slow.

Quinine.

The results of last weeks' sale of bark in London appears to have had rather a depressing effect upon the quinine market, as the feeling during the past few days has been easy if not actually weak. There are more sellers than buyers and this fact in connection with the unfavorable view taken of the bark situation by some holders threatens to cause a material decline in prices. There are now sellers of some of the favorite brands at 42c though outside holders of B. & S. are not disposed to release their stock below 43c and in some instances demand 44c. These figures do not appear to suit buyers, and the market closes dull. The domestic manufacturers report that the consuming demand is slow, and jobbers do not appear to be very busy.

The receipts of quinine for the week have been 40,000 ozs entered at the Custom House.

Receipts of quinine for the week	40,000
Since Jan. 1.....	1,277,198
Corresponding period last year.	643,100

Miscellaneous.

Alcohol is generally quoted at $2 01@2 05 though some outside lots have been offering at less. Pending the negotiations now making to form a "distillers' trust" the market is somewhat unsettled. The situation is reviewed on our editorial pages.

Wood alcohol is unchanged and meets with a fair jobbing demand. We continue to quote $1 20@1 25 for 92 per cent and $1 25@1 30 for 95 per cent according to quantity.

SALOL.

Dr. F. VON HEYDEN'S Successor at Radebeul-Dresden, Manufacturers and Patentees for Germany and United States of America.

W. H. Schieffelin & Co., New York,

Sole Agents for the United States and Canada for this Factory.

Registered Trade Mark. "Salol."

This remedy, which we were the first to extensively introduce to the medical profession of the United States, is a compound of Phenol and Salicylic Acid.

Salol has attracted very great attention by reason of its value in the treatment of Rheumatism and Rheumatic affections, as well as other diseases. It possesses all the advantages of Salicylic Acid and Salicylate Soda, while not causing any of their objectionable effects.

To those who desire fuller information concerning the history, properties and uses of Salol, we would state that we have published "A Treatise on Salol," in which is incorporated the notes of F. E. GEORGI, M.D., Physician to the City Hospital, Goerlitz (Silesia). This Treatise will be mailed to anyone on application.

This valuable remedy is best administered in the pilular form. We prepare our Soluble Pills of Salol in strengths of 2½ grs. and 5 grs. to each pill. We quote:

SALOL.

In 1 lb. bottles.....	$5.00 per lb.
In ½ lb. "	5.10 "
In ¼ lb. "	5.25 "
In 1 oz. "	40 per oz.
In lots of 5 lbs.	4.75 per lb.
" " 25 ounces, in 1 oz. bot...	.35 per oz.

Special quotations for large lots.

SALOL PILLS.

	Bottles of 100 Pills.	Bottles of 500 Pills.
W. H. S. & Co.'s Soluble Salol Pills 2½ grs.	$1.50	$7.30
" " " 5 "	2.50	12.30

Pills subject to usual discount.

Soliciting your orders, we are, yours truly,

W. H. Schieffelin & Co.,

170 & 172 William St.,

NEW YORK

NEW YORK

Quinine and Chemical Works

LIMITED

Office. 114 William St., New York.

MANUFACTURERS OF

QUININE, ALOIN

MORPHINE,

SANTONINE. COCAINE

McKesson & Robbins,

IMPORTED BAY RUM.

We offer this article of our own direct importation, made expressly for us from a standard sample, hence a uniformity in odor and general characteristics. Original puncheons and barrels. Proof never below 108°. Prices and Samples on application.

ROSENGARTEN & SONS, 12 Gold Street New York.

MANUFACTURING CHEMISTS, Philadelphia.

Sulphate of Quinine,	Bromide of Potassium	Hypophosphites,
Muriate of Quinine,	Nitrate of Silver,	Subnitrate of Bismuth,
Citrate of Iron and Quinine,	Iodide of Potassium,	Spirits of Nitre,
Sulphate of Cinchonine,	Sulphate of Morphine,	C. P. Acids,
Sulphate of Cinchonidine,	Acetate of Morphine,	Tannin,
Sulphate of Quinidine,	Muriate of Morphine,	Resublimed Iodine,
Bromide of Ammonium,	Nitrate of Ammonia.	Ether.

C. F. BOEHRINGER & SOEHNE,

Mannheim, Germany,

MANUFACTURERS OF

QUININE,

COCAINE, CAFFEIN,

AND OTHER CHEMICALS.

Represented by L. ENGELHORN, 49 Cedar Street,

NEW YORK.

KALLE'S ANTIFEBRIN

Trade Mark Registered under No. 13,803.

William Osler, M. D., Professor of Clinical Medicine in the University of Pennsylvania, writes in "*The Therapeutic Gazette*, March 15, 1887, "Antifebrin is a *prompt* and *powerful* antifebrile agent, *easy to take* and *free from unpleasant effects*."

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Just Received. Large Importations.

KALLE'S ANTIFEBRIN

($C_6H_5NHC_2H_3O$) Trade Marked, in original 5 kilo boxes and in 1 oz. cartons, **at reduced prices.**

ACETANILID, C. P.

($C_6H_5NHC_2H_3O$) identical with Antifebrin, in bulk and in 1 oz. cartons.

COCAINE MURIATE

In Anhydrous Crystals, absolutely C. P., of superior quality.

Salicylic Acid, Atropia, Benzoic Acid, Iodol, Urethan, Salol, Adonidin, Caffein, Resorcin, Strophantus Seed & Tincture, &c.

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PURE OLIVE OIL,

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Acid Phosphate, Kainit, Muriate of Potash Crude and Ground Mineral Phosphates.

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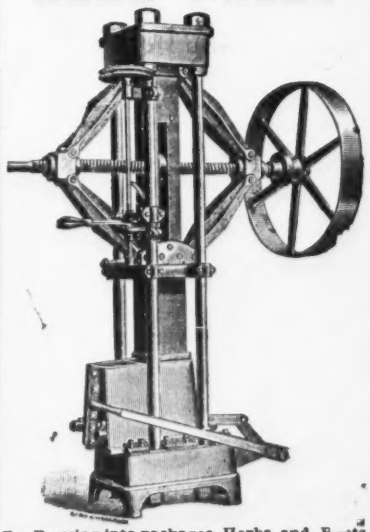

For Pressing into packages Herbs and Roots making a complete pressing every 45 seconds. Address BOOMER & BOSCHERT PRESS CO., SYRACUSE, N. Y.

Borax is a trifle firmer as California refined is growing quite scarce. City is quoted at 6¼@6½c as to quantity and California at the same price. Of concentrated we hear 30 tons have been sold to arrive at 4¾c but holders want 5@5¼c for spot lots. The demand is light.

Carbolic acid is offered more sparingly and is a shade firmer, though without quotable change. For drums 28@30c is asked and pound bottles 35c. There is not much inquiry.

Castor oil is selling to a fair extent according to the requirements of consumption, and may be written steady at 17@17½c in barrels and 17½@18c in cases.

Citric acid of English make is a little easier. The outside holders, tired of waiting for an advance, are becoming anxious to dispose of their stocks and their offers to sell have weakened the market. The nominal quotation is 51c, but 50½c and possibly less will buy. The American manufacturers are again accepting orders. Their price is still 50@51c. There is a good demand, though small lots receive the most attention.

Codliver oil is in moderate request at the former range of prices. Of Norwegian we note the sale of 175 barrels to arrive at a private price. The manufacturers are asking higher prices for fall deliveries, but there is no change here. We continue our quotations of $27@32 per barrel as to brand. Newfoundland is nominally quoted at 70@75c, and might be bought at less.

Colocynth apples of the Trieste variety are doing better. There is an active demand, and since our last there have been sales of 15 cases on private terms. Advices from Trieste are that the market there is very bare of stock and that higher prices are expected. Holders here are asking 40@42c, as to quantity and quality. Spanish are unchanged and quiet at 22@23c.

Cuttlefish bone continues to tend upward, the principal holders now asking 18c for limited quantities. Bids of 16c have been refused. Some is still available at 13½c for single straps but this price is made to out of town buyers only. A sale of 10 strap jewelers bone is reported at 20c, which about clears the market of this kind. We also note the sale of 5 casks broken at 11c, the range being 10@11c as to holder.

Glycerine is irregular in price owing to competition between domestic and foreign brands. The nominal quotations are 21@21½c in dms but we understand that this has been shaded. The demand continues limited and only small sales are reported.

Japan wax is in good demand at slightly better prices. For first quality 11½@12c is now asked, while 10½@11c is demanded for second grades. The tendency is upward. Sales of 60

MEDAL AND DIPLOMA U.S. CENTENNIAL EXPOSITION PHILADELPHIA 1876.
CABLE ADDRESS - CRYSTAL, HOTTAWA, MICHIGAN.
EXPOSITIONS INTERNATIONALES & GRAND PRIZE. MEDAL
MEDAL AND DIPLOMA AMERICAN INSTITUTE NEW YORK 1878
ALBERT M. TODD,
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THE MOST EXTENSIVE PEPPERMINT WORKS IN THE WORLD
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CRYSTAL WHITE REGISTERED
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GROWER DISTILLER AND REFINER OF HIGHEST QUALITY ESSENTIAL OILS &
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ALL GENUINE CONTAINERS HAVE MY NAME IMPRESSED THEREON BEING ALSO SEALED WITH GUARANTEE OF QUALITY OVER MY SIGNATURE AS FOLLOWS:
IN EVERY RESPECT THE HIGHEST QUALITY AND ABSOLUTELY PURE
"CRYSTAL WHITE"
ESSENTIAL OILS
DOUBLE DISTILLED & REFINED
NOTTAWA, MICHIGAN, U.S.A.
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PROCESSES, APPARATUS &c. PATENTED.
TWO GOLD MEDALS N.O. CENTENNIAL 1884 &
SEE THAT THE SEALS ARE INTACT!

Now obtainable through leading Wholesalers throughout the World at Special Prices in the usual bottles of 500 grams, 1 lb., 8 oz. and 4 oz., and 20 lb. tins, sealed and guaranteed as specified, including

Peppermint, Spearment, Sassafras, Wormwood, Camphor, Tanzy, Erigernon, Pipmenthol, (Crystals and Inhalant.)

The manufacturer positively guarantees the "Crystal White" not only ABSOLUTELY PURE and IN EVERY RESPECT THE HIGHEST QUALITY MANUFACTURED, but also the MOST ECONOMICAL IN USE less being required, while the HIGHEST POSSIBLE RESULTS are uniformly and quickly obtained. Specify this brand in your next order. Notice the *purity, strength, aroma, stability* and *entire perfection of manufacture.*

Such trial by you will result in benefits mutual and permanent, as you will thereafter use no other.

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BRANCH OF WARRICK FRÈRES, Grasse, France; WARRICK BROS., London, England.

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Sole Agents for the ALUMINIUM UND MAGNESIUMFABRIK, PATENT GRATZEL *BREMEN, GERMANY.*

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Drug Millers & Importers,
Offer to the Wholesale and Jobbing Trade. Drugs of our own powdering and guarantee Selection and Purity.

Assafœtida,	Soap,	Insect Flowers,	Orris Root
Alum,	Cubebs,	Gum Arabics,	Hellebore,
Aloes,	Centian,	Camboge,	&c., &c.

IN BARRELS, BOXES, &c.
East India Plumbago, German Lead,
—AND—
ALL GRADES OF PUMICE STONE.
CORRESPONDENCE SOLICITED

C. Zimmer Chemical Works,
Frankfort-on-the-Main, GERMANY.
—ESTABLISHED 1837—
OFFER TO THE TRADE THEIR STRICTLY PRIME
QUININE
And other preparations of Peruvian Bark on spot and for future delivery, in quantities to suit at lowest market quotations.
Represented by Johnson & Johnson,
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Aloes, Coca Leaves, Guarana.
Select Licorice Root,
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Juniper Berries, Rhubarb Root, Am. Saffron.
R. HILLIER'S SON COMPANY,
46 CEDAR STREET, NEW YORK.
Pure Powdered Drugs and Spices.

See James Chaskel & Co.'s Advertisement on Page 34.

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Oil of Lemon.
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Oils of Bergamot and Orange.
Quality guaranteed equal to any brand.
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BLATTA
Insect Powder.

The only preparation on the market that is sure death to

COCKROACHES.

The pure Dalmatian Insect Powder will not kill them.—The Blatta does it effectually as well as having all the properties of the Dalmatian in its safety and efficiency as an insecticide.

Blatta Powder is put up in large turned wood dredge boxes in handsome style, retails at 15 cents ana is a rapid seller.

Price, per dozen, $1.00.
" " gross, 10.00.
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For Sale by the Jobbing Trade generally.

Manufactured only by

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THE GENUINE
Carlsbad Sprudel Salt

None genuine without the Signature of Löbel Schottländer CARLSBAD (Austria)

NATURAL CARLSBAD SPRUDEL SALT TRADE MARK

None genuine without the Signature of Eisner & Mendelson Company PHILADELPHIA Sole Agents for the U.S.A

Is exported in round bottles with the Trade Mark and my Signature on the label, a stirp like the above fac-simile around the neck of every bottle bearing my Signature and the Signature of the Eisner & Mendelson Company, Philadelphia. Each bottle is put up in a paper carton.

All others I Declare to be Worthless Imitations.

My representatives in the United States, the EISNER & MENDELSON CONPANY, are instructed and employed to commence suits against any party handling, making, or selling any imitation of the genuine product.

Löbel Schottländer

Attested: Eduard Finally.
Mayor of the City of Carlsbad.

CARLSBAD,
AUSTRIA.

STADTRATH KARLSBAD

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Strictly Chemically Pure Acids,
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Correspondence Solicited.

A new work, The History and Chemistry of Menthol Preparations, sent free upon application.

cases are reported within the above quoted range.

Quicksilver is higher owing to the advance to £8 15s by the Rothschilds in London last week. Holders here now ask 51@53c, as to quantity. There is not much doing, as buyers are pretty well supplied. The San Francisco *Journal of Commerce* of the 30d ult. reports: The market is lower at $38@39; corresponding time last year, $35 50@36. Exports since our last:

	Flasks.	Value.
To Mexico	52	$3,080
Previously since Jan. 1	5,824	224,156
Total since Jan. 1, 1887	5,876	$227,236
Corresponding time 1886	3,655	123,756

Receipts in January, 2,497 flasks; Febuary; 2,018 flasks; March, 2,073 flasks; April, 1,350 flasks; May, 2,070 flasks; since June 1, 1,175 flasks. Total since January 1, 11,183 flasks. Corresponding time in 1886, 11,955 flasks.

Balsams.

The demand for balsam copaiba is very light. The recent arrivals are held at prices too high to suit the jobbers and they remain unsold. The jobbing quotation for Central American is a trifle easier, sales of some 500 lbs having been made since our last at 39@40c. Para and Maranham are unchanged at 42½@43c, and Angostura is still quotable at 45@47½c. Canada balsam fir of the new crop is beginning to arrive, and prices are lower. The present quotations are $2 75 @ 3 00, at which a fair number of jobbing sales are making. Oregon is nominally held at $1 20@1 25. Balsam Peru remains inactive, with quotations nominaly unchanged at $1 15@1 20. Balsam tolu is moving fairly into consumption, the market remaining firm at 32@34c as to holder and quantity.

Beans.

There is nothing specially new to report in this market. For tonkas there is a fair jobbing inquiry which is met at former prices. These are $1 25@1 40 for Angostura, 65@70c for Surinam, and 40@45c for Para. In vanilla beans business continues good, the hot weather stimulating the demand. Prices range from $7@15 for whole and $6@8 for cuts.

Berries.

Cubeb berries are weak and depressed. There is nothing selling and as buyers have manifested no interest in the article for some time past, holders have steadily reduced their pretensions until now XX can be bought at 8½c and ordinary at 75@80c. Some holders would probably shade these figures. The demand for juniper berries is moderate, but prices are steady at 3@4c as to quality.

Essential Oils.

Few new features have been developed in this market during the past week. Trade in general has been fair, but there is no activity in any line. Prices are steadily maintained and we find few changes to report.

Anise oil is selling fairly at former prices the market being firm and stocks concentrated. We quote $1 95@2.

Clove oil is still irregular in price but there is no quotable change, the range extending from 1 60@1 85c as to brand. Citronelle oil is in active request but the sales are principally of small lots. We hear of sales of 5000 lbs at a shade below our quotations.

Peppermint oil is still tending downward and the market is very dull. The outlook is favorable to a large crop and buyers are in no hurry to secure supplies. Tin oil is quoted nominally at $2 45@2 50 for western and $2 60@2 65 for Wayne county but could probably be bought at less from some holders. Case oil is neglected and is procurable at $3 30@3 35 and possibly less in a large way, but there appear to be no buyers.

Oil lemon is in good demand and the same may be said of orange. Bergamot has advanced abroad and higher prices are expected here.

Sassafras oil is quiet but the market is steady and we hear of nothing offering at less than 34@36c as to gravity.

Wintergreen oil comes forward slowly and as supplies on the spot are light holders entertain very firm views. There is a fair demand at $2@2 10.

Flowers.

The market for chamomiles has remained very firm, with an upward tendency. Late reports from Germany indicate that the crop there will be smaller, as the large yield of grain has prevented the growing of chamomiles. Prices abroad are advancing and holders here are looking for higher figures. The present quotations are 16@30c as to quality, the latter for a fancy article. Roman are also firm at 15@16c for prime quality. The demand for both kinds is only moderate. Valencia saffron is advancing and prime is now held at $13@13 50. Alicante is unchanged at $8@8 50.

Gums.

Arabics remain in a strong position, but are selling in small quantities only. Senegal is in good demand in a jobbing way and commands full prices. The foreign markets are still advancing, and prices here are very firm. Tragacanths are higher in London, but there has been no further change here, probably on account of the slow demand. Camphor is now procurable from the manufacturers for prompt delivery at 23c in barrels and 24c in cases. There is a good demand which absorbs the current production, allowing no surplus to accumulate. In other gums there is nothing of special interest to report.

Herbs and Leaves.

Short buchu leaves are plentiful and cheap but do not attract much attention. The quality of the new crop is said to be fine. We quote 7@10c as to quality, at which small sales are noted. The cheap grades of Tinnivelly senna are getting very scarce and we understand that nothing is now procurable at less than 12c. The quotations range from that figure up to 25c according to quality. Alexandria are firm but not in much demand.

Roots.

There are about the same general features to note in this market as at this time last week. Trading is confined for the most part to the supplying of jobbing orders and prices on the whole are well maintained. Ipecac is tending downward under unfavorable advices from London where prices according to late advices have declined to 6c for whole root. There is very little doing on the spot and while $2 remains the nominal quotation, we hear that sales have been made at much less by some holders. There is still considerable activity in Jamaica ginger and prices are well supported. We continue to quote 13½@14c for bleached and 11@12c for unbleached. Rhubarb is in good jobbing demand at steady and unchanged prices. A sale of 300 bales Mexican sarsaparilla for export at 7½c has relieved the market of pressure and the feeling is firmer. Jobbing sales are making at 7½@8c. Honduras is quiet and unchanged.

Seeds.

The market for seeds displays very little animation, and prices for most descriptions are largely nominal. Celery seed is firmer, most holders now demanding 9½c, owing to small supplies and a good demand. The market is better supplied with English and German rape seed, and sales are now making at 4c for the former and 3¼c for the latter. The lots arriving find ready buyers and there is no surplus.

Shellac.

The market, in nearly all essential particulars, is in the same shape as when we last wrote. There is a seasonable jobbing demand, and full prices are obtained for the lots moving, but there is no inquiry for large lots, either for prompt or future delivery. According to the *Commercial Record* of the 1st inst, the London market is flat, in consequence of the showing made by the monthly statistics: "Second orange sort, on the basis of T N quality, have been rather over-sold for May-June shipment, and 500 to 600 cases have been bought back by the Greeks at 43@44s c. i. f., and now the market is dull at 44s c. i. f. sellers, but no buyers."

Spices.

Business has been confined for the most part to the supplying of jobbing orders, and no large transactions are reported. Prices throughout the list are firm, and but few changes have occurred since our last. Mace is still tending upward, and Batavia is now held at 62½c. Achcen pepper is now quoted at 14½@15c, white Penang at 23½c, and Zanzibar red at 7@8c.

Among the distinguished visitors to the city last week was Mr. J. J. Mack, of Messrs. J. J. Mack & Co., of San Francisco, Cal.

Mr. W. S. Mersereau, of Messrs. W. H. Schieffelin & Co., left yesterday on his annual vacation. Part of the time he will spend at Point Pleasant, N. J., leaving there for the Adirondacks. He will be back at his desk again in about three weeks greatly benefitted, we trust, by his outing.

Mr. Anthony M. Hance, of the Philadelphia firm of Hance, Bros. & White, departs to-day on the Britannic for a short trip to England and France. He complimented the REPORTER by a call, and said he would be back in time to attend the annual convention of wholesale druggists in Boston next month.

Estimation of Copper and Arsenic in Pyrites.

BY DR. R. NAHNSEN.

The extensive use of copper bearing pyrites, during recent years, for the manufacture of sulphuric acid, has made the estimation of copper, which was formerly rarely required in sulphuric acid works an operation of regular and continual recurrence. The consequent necessity for a rapid, and accurate method for estimating the copper, has brought out the following method, which during the past two years has given entirely satisfactory results.

The pyrites examined were mostly from Pomaron, Portugal, and contained from 0·3—0·5 per cent copper, together with small quantities of silica, lead, arsenic, bismuth, and antimony.

12·5 gms. of the finely pulverized pyrites, are placed into a thin glass beaker, about 17 cm. high, and covered with 10 cc. water, and 1 cc. strong sulphuric acid. The beaker is covered with a porcelain dish, and nitric acid, of specific gravity 1·4, is added, in small portions as long as any effervescence ensues. The liquid is then boiled over a strong flame. After a few minutes the dish, which is sufficiently washed by the condensed vapors is removed, and the boiling is continued, until the thickened liquid barely moves, on shaking the beaker, and yel-

JOHN J. THOMSEN,
251 W. Balto. and 66 & 58 German Sts
BALTIMORE, MD.,
IMPORTER AND EXPORTER OF
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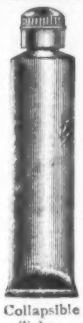
SPECIALTY.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MANUFACTURER OF
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ALL SIZES.
Pill Machines, Pill Compressors for Hand or Power.
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Importers and Wholesale Dealers in
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ROGERS & PYATT,
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Shellac, all grades. Verdigris, Pods. Granulated and Powdered.
Button Lac, Cudbear.
Seed Lac, Madder,
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Gum Sandarac, Gum Senegal.
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THE ALBERT DICKINSON CO.
Dealers in Timothy, Clover, Flax, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.
POP CORN.
Warehouses: 115, 117 & 119 Kinzie St., OFFICE, 115 KINZIE ST., 104, 106, 108 & 110 Michigan St., CHICAGO, ILL.

Olive Oils and Castile Soaps,
LIEBMAN & BUTLER,
22 South William Street. NEW YORK.

CHAS. H. NORTH & CO.,
SOLE MANUFACTURERS OF
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With best facilities and large experience we make a Pepsin superior to all others, and will dissolve 1,600 times its own weight of Albumen.
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Sugar and Gelatine Coated Pills,
STANDARD AND FANCY COURT PLASTERS,
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WHOLESALE DRUGGISTS
Why don't you handle the Latest, Best and Most Saleable line of
CHEWING GUMS?
THEY ARE MADE BY
W. J. WHITE of Cleveland, O., U. S. A.

Yellow Band Tolu,	150 Pieces.	Bon Bon,	150 Pieces.
Star Tolu,	72 "	Red Robin,	100 "

All in 5-Cent Bundles.

WHOLESALE PRICES CURRENT.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

Oils, Etc.

Vegetable Oils.

Linseed Domestic Raw, in bbls,	₩ gal.	49 —
Boiled, in bbls		— @52
Calcutta, Raw, in bbls		— @56
Western on spot		47 @48
Rapeseed, in bbls		55 @57
Cottonseed, Crude Prime		35 @37
Crude, off quality		30 @32
Yellow Summer Prime		39 @42
Yellow Summer, off qual.		37 @39
Yellow Summer cooking		— @43
White Summer		— @43½
Yellow Winter		—45 @46
White Winter		46 @47
Soap stock		1¼ @ 1½
Olive, Sicily		.68 @70
Spanish		.70 @72
Soap Stock		— @—
Palm, Prime	₩ lb	4½ @ 5½
Off quality		— @ 4½
Cocoanut, Cuban		— @ 6½
Ceylon		5½ @ 5¾
Cochin		7¾ @ 8
Castor, No. 2		— @—
No. 3		.16 @16½
Rosin, First run	₩ gal.	— @ 9
Second run		— @12
Third run		— @15
Deodorized		— @18

Animal and Fish Oils.

Whale, Natural Winter	₩ gal.	.38 @ 40
Bleached Winter		40 @ 41
Extra Bleached Winter		42 @ 43
Elephant, Bleached Winter		— @ 55
Natural Winter		51 @ 52
Sperm Natural Winter		68 @ 70
Bleached Winter		73 @ 75
Natural Spring		62 @ 64
Bleached "		67 @ 70
Lard, Prime City		53 @ 54
Prime, Western		52 @ 53
Extra No. 1		44 @ 50
No. 1		38 @ 45
No. 2		32 @ 35
Menhaden, Prime Crude		21½ @ 22
Prime Southern		21 @ 22
Brown Strained		25 @ 26
Light Strained		26 @ 27
Extra Bleached Winter		31½ @ 32
Bleached Winter		28 @ 28½
Bank		25 @ 26
Straits		26 @ 27
Oleo		8 @ 9
Cod Domestic, prime		33 @ 34
Newfoundland		— @ —
Black Fish, Crude		— @ —
Natural		— @ —
Bleached Winter		— @ —
Degras, English		2½ @ 3
French		— @ —
Tallow		36 @ 45
Neatsfoot, Prime		60 @ 75
No. 1		58 @ 61
No. 2		45 @ 50
Saponified Red		30 @ 32
Elaine Red		30 @ 33

Mineral Oils.

Paraffine Gas Oil	₩ gal	5½ @ 6
Paraffine, 22@24 gravity		.12 @14
25 gravity		8 @ 9
28 gravity		6½ @ 7
Red, 23 gravity		@12
24 "		9 @10
Neutral Filtered, 32 grav. bloomless		16 @20
extra cold test		— @—
34 gravity, bloomless		13 @20
37 gravity, bloomless		12 @14
32 gravity, wool grade		12 @13
West Virginia, Natural, 29 gravity		.17 @18
Franklin Natural, 32 gravity		— @—
Smith's Ferry, 33@34 gravity		7½ @ 8
Black Reduced, 29 gravity, 25@30 c. t.		6½ @ 7½
29 gravity, 15 cold test		8 @ 9
29 gravity zero		—@—
Summer		5½ @ 6
Cylinder, Light Filtered,		.15 @20
Dark Filtered		12 @15
Extra cold test		— @—
Dark Steam Refined		9 @16

Oil Cake

Calcutta Cake, City	₩ ton.	— @ —
City domestic		22 00@22 25
Western, in bags		21 50@22 00
Cottonseed cake at Memphis		17 25@17 50
do do New Orleans.		20 00@ —

Oil Meal.

State domestic meal	₩ ton	— @24 00
Cottonseed meal at Memphis		15 50 @16 00
do do New Orleans.		— @20 50

Wax, Candles, Lard, Tallow, Etc

Paraffine Wax, Crude, 126 m p	₩ lb	3½ @ 4
128@130 m. p		4 @ 4½
Refined		9 @10
Candles, Paraffine 4s and 6s		8½ @11
12s		9 @12
Adamantine 6s, 16 oz		— @ 9
14 oz		— @ 8
12 oz		— @ 7
12s, 16 oz		— @10
14 oz		— @ 9
12 oz		— @ 8
Patent Sperm, 4s and 6s		49 @50
Sperm, 4s and 6s		43 @44
Stearic Acid		11½ @13
Spermaceti		40 @41½
Lard		6 4 @7
Stearine		6¾ @ 8¼
Tallow		3⅞ @ —

Naval Stores.

Sp tur'tine	— @33½	I	1 65
St'd rosin	1 05	K	1 80
G'd st'd	1 10	M	1 95
H	1 20	N	2 10
F	1 35	W G	2 50
G	1 45	WW	2 85
H	1 50		

Paints, Varnishes, Etc.

White Lead, Zinc Etc.

American Dry White Lead	₩ lb	5½ @ 6
Pure White Lead, in oil		5½ @ 6
English White Lead, in oil		8½ @ 8¾
Zinc White, Paris, G S, 50 bbls		7½ less 4 ₩ ct
G S, 25 bbls		7½ 2 ₩ ct
G S, 10 bbls		7½ 1 ₩ ct
R S, 50 bbls		6½ 4 ₩ ct
R S, 25 bbls		6½ 2 ₩ ct
R S, 10 bbls		6½ 1 ₩ ct
Antwerp R S, 50 bbls		5½ 4 ₩ ct
R S, 25 bbls		5½ 2 ₩ ct
R S, 10 bbls		5½ 1 ₩ ct
V M Co., grinding in poppy oil, Green Seal		9½@10
Grinding in poppy oil, Red Seal		8 @ 8½
French in Varnish		16 @20
American Extra Dry		4½@ 4½
Off color		4 @ 4½
In oil		6¾@ 6¾
In varnish		14 @18¾
L. Z. O. German Zinc		5½@ 5
China White		10½@12
Flake White		10½@12
Cremnitz White		15 @20

Dry Colors.

REDS.

Carmine No. 40	₩ lb	2 85@ 3 05
Crocus Martus, Imported		1½@ 2½
Standard American		1½@ 2½
Colcothar		3½@ 6
Indian Red, American		5½@ 6½
Standard American		2 @ 3
English		5½@ 7
Fuscan Red, English		9½@ 11
Turkey Red, English		9½@ 14
Litharge, English Flake		9 @ 9½
American Powdered		5½@ 6
Red Lead, English		7½@ 8
American		5½@ 6½
Orange Mineral, English		7½@ 8½
French		8½@ 9¾
German		8½@ 8¾
American		7¾@ 8
Rose Pink, English		9 @ 9½
American		8 @ 8½
Vermilion, Imported English		65 @ 70
Am. Quicksilver, bulk		48½@ 50
Am. Quicksilver, bags		49½@ 51
Chinese		72 @ 77
Trieste		72 @ 77
American		9½@ 10
Artificial		7 @ 25
Venetian Red, Cookson's		40 @ 45
H.R.Co's Diam'd M		45 @ 50
Diam'd H		10 @ 25
F V A		06 @ 20
L N & Co Diamond H		10 @ 30
H B		10 @ 30
Bell Brand		@ 45
B O W		— @ 30
V V R		— @ 60
Crown		40 @ 50
Lion		30 @ 25
Anchor H		10 @ 30
American		00 @ 30
Cutter		30 @ 35

YELLOWS.

Chrome Yellow		10 @ 25
Ocher, Rochelle		35 @ 50
Washed Dutch		5 @ 5
Washed French		2 @
Washed Nat Oxford, Lump		6½@ 6¾
Washed Nat Oxford, Powd'r		7 @ 7¾
Golden		3¾@ 4
Domestic		1 @ 1½

GREENS.

Chrome Chemically Pure		22 @26
Extra		12 @13
Super		9 @11½
Common		5 @ 8
Paris, Pure		17 @18
In Pulp		11 @12
French Verdigris		40 @42

BLUES.

Chinese Blue		48 @52
Prussian Blue, pure		35 @40
Soluble Blue		45 @55
Ultramarine Blue		7 @25
Celestial Blue		5½@ 6
Blue Verditer		25 @30
Refiners'		60 @70

BROWNS.

Sienna, Italian, burnt & powdered		6 @ 6½
Burnt lumps		3 @ 3½
Raw powdered		6 @ 7
Raw lumps		3½@ 4
American, burnt & powdered		1½@ 1¾
American, raw		1½@ 1¾
Umber, Turkey, burnt and powdered		3½@ 4
Burnt lumps		2½@ 3
Raw and powdered		3½@ 4
Raw lumps		1½@ 2¾
American burnt		1½@ 1¾
American, raw		1½@ 1¾
Vandyke Brown, English		6 @ 8
American		3 @ 3¾
Spanish Brown		¾@ 1

Miscellaneous.

Barytes, Prime White	₩ ton.	16 00 @18 00
Foreign Floated		19 00 @21 00
Domestic Floated P&K		30 00 @32 00
Off color		12 50 @14 00
Chalk		2 90 @ 2 95
Kiln Dried	₩ 100 lbs.	— 40 @ —
Air Dried		— 30 @ 35
China Clay	₩ ton.	13 00 @18 50
Cobalt oxide		2 05 @2 30
Feldspar	₩ ton.	14 00 @
Whiting, Commercial	₩ 100 lbs	— 45 @ —
Gilders'		— 55 @— 60
Paris White, English Cliffstone		1 05 @ 1 15
American		65 @— 80
French Talc		1¼ @ 1⅝
Terra Alba		— 75 @ 80
English Terra Alba		— 75 @ 80
Blanch Fix	₩ lb.	— 2½@— 3
Dentists' Plaster	₩ bbl.	1 35 @ 1 50
Calcined Plaster	₩ bbl.	1 25 @ 1 50
Marble Dust	₩ bbl	90 @ 1 00
Pumice Stone, original cks	₩ lb.	1½@— 1½
Selected lumps in bbls		2½@— 2¾
Powdered Pure in bbls		1½@ 2¼
Rotten Stone, original cks		— 4 @— 5
Selected lumps		— 5 @— 7
Powdered, in bbls		— 3½@— 3¾
Rubbing Stone		— 5 @— 7
Bronze Powder		— 45 @10
Brocades		— 45 @ 1
Smalt German Blue		— 15 @—
Super Black		— 8@ 1
Putty in bulk		— 1¾@— 2
In Bladders		— 2 @— 2½
In Tins		— 2½@— 2¾

Glues.

Extra White	₩ lb.	.18 @23
Medium White		.16 @18
Cabinet		.14 @16
Low grade		.12 @14
Foot stock white		9¼@13½
brown		4½@ 8
Irish		.13½@16
French		.10½@22½
English		12 @18

Metallic Paints.

Brown	₩ ton.	$27 50@32 50
Red	"	27 50@32 50
Yellow	"	27 50@32 50

Colors in Oil

Black Coach, Japan	₩ lb.	.20 @40
In Oil		.12 @13
Drop Black		— @—
Ivory Black		.12 @14
Lamp Black		.12 @20
Chinese Blue		.35 @55
Prussian Blue		.20 @45
Ultramarine Blue		.12 @21
Burnt Sienna		7 @14
Raw Sienna		7 @14
Burnt Umber		7 @1
Raw Umber		7 @1
Vandyke Brown		7 @14
Chrome Green		8 @14
Paris Green		.16 @24
English Drop Black		.12½@14
American Drop Black		7½@10
Frankfort Drop Black		.25 @30
Lampblack, Prime		.27½@33
Medium		.19½@26
2d quality		.13 @19
Low grade		6½@10
Naphtha, Black		.60 @—
Fine Calcined Velvet Black		.16 @25
Medium Calcined Velvet Black		.12 @15

Varnish.

Wearing Body	₩ gal.	4 00 @5 00
One Coat Coach		3 00 @4 00
Elastic Gear		3 50 @4 00
Hard Drying Body		3 50 @4 00
Rubbing Body		3 00 @4 00
Quick Rubbing		2 50 @3 50
Black Rubbing		3 00 @4 00
Extra No. 1 Coach		1 50 @2 25
Light No. 1 Coach		1 25 @2 00
No. 1 Coach		1 10 @1 50
Light Coach Japan		1 10 @1 50
Extra No. 1, Furniture		1 15 @1 50
No. 1 Furniture		75 @1 15
Hard Oil Finish		1 00 @2 00
Damar Varnish		1 25 @1 50
Black Asphaltum		75 @1 00
White Shellac		2 20 @2 50
Orange Shellac		1 80 @2 30
Brown Shellac		1 70 @2 00

Varnish Gums.

Copal, Sierra Leone, cleaned		35 @ 40
Zanzibar, Bold white		75 @ 80
Medium white		70 @ 75
Bean & Pea		35 @ 40
Manila, Pale		17 @ 20
Bright amber		— @ 12
Standard		10 @ 11
Damar, Batavia		20 @ 21
Kauri, Standard		19 @ 20
No. 2		14 @ 16
Hard Scraped		— @ 22
Light hard scraped		— @ 37
Picture quality		— @ 65
Pale and Fine Selected		42 @ 65
Sandrac		20 @ 25
Asphaltum, Cuban, prime		5½@ 6½
Cuban, sandy		4½@ 5½
Egyptian		— 8 @ 9

Glass.

PLATE AND WINDOW.

FRENCH SINGLE.

Prices per Fifty Feet.

Sizes.	1st.	2d.	3d.	4th
6x 8 to 10x15	$10 50	$ 9 00	$ 8 50	$ 8 00
11x14 to 16x24	11 50	10 75	10 25	9 75
18x22 to 20x30	15 50	14 00	13 00	12 50
15x36 to 24x30	16 50	15 00	13 50	.....
26x28 to 24x36	17 75	16 25	14 75	.....
26x36 to 26x44	19 00	17 50	15 25	.....
26x46 to 30x50	21 00	19 50	17 00	.....
30x52 to 30x54	22 00	20 25	18 00	.....
30x56 to 34x56	23 00	21 25	19 00	.....
34x58 to 34x60	24 00	22 75	21 00	.....
36x60 to 40x60	26 50	24 50	23 00	.....

FRENCH DOUBLE.

Prices per Fifty Feet.

Sizes.	1st.	2d.	3d.	4th
6x 8 to 10x15	$13 00	$12 50	$12 00	$11 50
11x14 to 16x24	16 00	15 00	14 50	.....
18x22 to 20x30	20 50	19 50	18 50	.....
15x36 to 24x30	22 00	20 75	19 50	.....
26x28 to 24x36	25 00	23 00	21 50	.....
26x36 to 26x44	26 00	25 00	23 00	.....
26x46 to 30x50	28 00	26 50	24 50	.....
30x52 to 30x54	30 00	28 00	26 00	.....
30x56 to 34x56	31 00	30 00	28 00	.....
34x58 to 34x60	32 50	31 00	29 00	.....
36x60 to 40x60	36 00	33 50	32 00	.....

Discounts:—75 & 5 to 75 & 10 for S & D.

AMERICAN SINGLE.

Sizes.	1st	2d.	3d.	4th
6x 8 to 10x15	$ 8 75	$ 8 00	$ 7 50	$ 7 00
11x14 to 16x24	10 00	9 25	8 75	8 00
18x22 to 20x30	12 50	11 50	10 25	9 00
15x36 to 24x30	13 25	12 00	10 75	9 50
26x28 to 24x36	14 50	13 00	11 50	10 25
26x36 to 26x44	15 00	13 50	11 25	11 00
26x46 to 30x50	16 75	15 25	13 75	11 75
30x52 to 30x54	17 50	16 00	14 25	.....
30x56 to 34x56	19 25	17 50	15 75	.....
34x58 to 34x60	20 75	18 75	16 75	.....
36x60 to 40x60	22 25	20 75	18 50	.....

AMERICAN DOUBLE.

Sizes.	1st.	2d.	3d.	4th.
6x 8 to 10x15	$13 00	$12 00	$11 00	10 00
11x14 to 16x24	15 50	14 00	13 00	12 00
18x22 to 20x30	19 50	17 75	16 25	.....
15x36 to 24x30	20 75	19 00	17 00	.....
26x28 to 24x36	22 00	20 25	18 25	.....
26x36 to 26x44	23 00	21 25	19 00	.....
26x46 to 30x50	25 00	23 00	20 50	.....
30x52 to 30x54	25 50	24 50	22 00	.....
30x56 to 34x56	28 50	26 25	23 50	.....
34x58 to 34x60	31 50	29 00	26 00	.....
36x60 to 40x60	34 50	31 75	28 50	.....

Discounts:—70 & 10 for S. and 10 & 5 or D

Drugs.

Opium.

Opium, in bond	₩ lb.	3 85 @4 00
duty paid (cases)		4 85 @5 00
as wanted		4 85 @5 00
powdered		5 90 @6 00
Morphine		3 10 @3 60
Foreign		3 00 @3 20

Quinine.

Quinine, American	₩ oz.	47 @ 58
English		—— @——
French		51 @ 58
German		42 @ 52
Cinchonidia, American		8 @ 9
Foreign		4½@ 6
Quinidia German		16 @ 20

Miscellaneous.

Acid benzoic, German	₩ lb	45 @ 50
English	₩ oz	12½@ 13
boracic purified	₩ lb	23 @ 25
refined		17½@ 18
flaky		17 @ 17¼
Carbolic, pure crystals		28 @ 35
commercial		25 @ 30
Citric, Domestic		50 @ 51
Foreign		50½@ 51
Salicylic, bulk & boxes		1 62½@ 1 72½
Alcohol, 94 p ct, in bond	₩ gal	— @ —
Free		2 03 @ 2 05
Refi'd wood, 95 p ct		— @ 1 25
92 p ct		— @ 1 20
Dia Methyl, 98 p ct		1 35 @ 1 50
Inodorine, 97-99 p ct		1 60 @ 1 70
Cologne spirits, 188 p t		2 23 @ 2 25
Ambergris Gray		22 00 @24 00
Black		9 00 @12 00
Ammonia Carb. Foreign		8 @ 8¼
Domestic		8½@ 8¾
Bay rum imp. bulk		1 95 @ 2 00
Barbadoes Tar		@ 42
Borax, Refined City, bbls	₩ lb	6½@ 6½
Cal., bbls		6½@ 6½
Concentrated		5 @ 5½
Powdered		6½@ 6¾
Bromine		37 @ 38
Burgundy Pitch		2½@ 2¾
Cantharides, Russian		1 85 @ 2 00
Chinese		90 @ 1 00
Calomel, Domestic		65 @ 67
English		90 @1 00
Castile Soap, White		10¾@ 11¾
Mottled ordinary		4½@ 4¾
pure		5½@ 6
Chian Turpentine	₩ oz	45 @
Chloroform		— @ 35
Colocynth Apples, Trieste	₩ lb	40 @ 42
pressed		— @ —
Spanish		22 @ 24
Cacao Butter		42½@ 44
Chloral Hydrate, crystals		1 55 @ 1 70
plates		1 25 @ 1 45
Corrosive Sublimate		58 @ 60
Cuttlefish Bone, Trieste		12½@ 15
Dragon's blood mass		20 @ 22
" " reed		42 @ 45
Ergot, Spanish		35 @ 38
German		28 @ 30
Gelatine, English		50 @ 2 00
French		32 @ 85
American		85 @ —
Glucose		3 @ 3¼
Grape Sugar		3 @ 3¼
Glycerine, German, dms		21 @ 22
H L & Co, bbls & cs		24 @ 26
W J M G, bbls & cs		24 @ 26
A. G. Co. C. P., bbls & cs		24 @ 26
do do No 1, pure white		19½@ 24
M W & Co. C P Bbls & cans		22 @ 24
" " P W Bbls & cs		17 @ 22
M & R Bbls & cs		23 @ 24
Guarana, Whole		1 35 @ 1 40
Powdered		1 40 @ 1 45
Iceland Moss		4½@ 5
Indian Hemp, (Canabis In)		12 @ 14
Insect Powder		38½@ 42
B. W. B		42 @ —
Irish Moss		5 @ 6
Isinglass, Russian		3 75 @ 4 00
American ordinary		75 @
prime		90 @ 1 05
Iodine, re-sublimed		3 55 @ 3 60
Licorice Corigliana		29 @ 30
Guzzolini		26 @ —
Guis Grasso		24 @ 26
"P. & S."		28 @ 29
Domestic		20 @
Paste		13 @
Lime Juice, bbls	₩ gal	50 @
Lupulin, American	₩ lb	70 @
German		50 @
Lycopodium, prime		37½@ 38
Manna, Large Flake		80 @ 85
Small Flake		50 @ 55
Sorts		45 @ 47
Menthol		7 50 @ 8 00
Musk, True Grain	₩ oz	15 00 @35 00
Tonquin Pods		15 00 @35
Canton Grains		18 @ 19
Nitrate Barium	₩ lb	8½@ 9½
Strontia	₩ lb	10½@ 11
Nux Vomica, pockets	₩ lb	3 @
Oil, Almond, Sweet		30 @ 37
Myrbane, American		19 @ 20
English		19 @ 20
German		— @ —
Sesame	₩ bbl	65 @ 70
Castor City, bbls & cases		17 @
Cod Liver Norwegian	₩ bbl	27 00 @31 00
No	₩ gal	70 @ 75

Phosphorus	℔	70	75
Precip. Red		75	77
White		80	82
Precipitated Chalk, Eng. bk		5	6
bdls		7	7
Potassium, Bromide, bulk		37	38
glass		45	46
Iodide, bulk		2 70	2 75
glass		2 15	2 20
Quicksilver		51	53
Sago, Pearl		3	3½
Flour		3½	3¾
Sugar of Milk, Cob		18	20
Powdered		19	21
Sulphur, Roll			1½
Flour			1¾
Santonine			3 75
Tamarinds	℔ kg	1 50	1 75
	bbls	—	8
Venice Turpentine	℔	20	24
Wax, Brown Southern		26	27
State		25	26
Bras l		12	16
White, pure		40	45
Japan		11½	12
Carnauba		11	16
Ceresin		13	14

Balsams

Copaiba, Angostura	℔	45	47½
Para		42½	43
Central American		39	40
Fir, Canada	℔ gal	2 75	3 00
Oregon		1 20	1 25
Peru	℔	1 15	1 25
Tolu		32	34

Barks

Angostura	℔	—	
Bayberry		7	8
Buckthorn		4½	6
Cascarilla		8½	9
Canella		12	12½
Cinchona, Red		20	1 45
Yellow		12	1 35
Coto		—	75½
Elm, common		9	10
selected		12	14
Loxa		30	32
Oak, White		3½	4
Red		3½	4
Orange Peel, West Indian		4	6
Malaga, prime		7	10
Curacoa		7½	15
Prickly Ash		12	15
Pomegranate (of root)		17	18
Quebracho		15	20
Sassafras		6	6½
Simaruba		30	40
Soap, Whole		5½	6
Crushed		6½	6¾

Beans.

Vanilla, Mexican	℔	7 00	15 00
Bourbon		6 00	16 00
Tonka Angostura		1 35	1 40
Surinams		65	70
Para		40	45
Calabar		35	50
St. Ignatius		50	55

Berries.

Cubeb	℔	75	85
Juniper		2½	4
Fish (Cocculus Ind)		4	4½
Laurel		5	—
Prickly Ash		20	—

Essential Oils.

Anise	℔	1 95	2 00
Almond (bitter)		2 50	6 75
Bay, ℔ bottle of 22 ozs		5 00	6 50
Bay Oil, per lb		3 62½	4 73
Bergamot		1 40	1 90
Black Pepper		65	5 50
Cajeput		75	80
Camphor		10	15
Caraway, Seed		1 55	2 25
Chaff		65	80
Cassia		70	75
Citronella		33	35
Clove		1 60	1 80
Copaiba		65	70
Croton		1 00	1 10
Cubebs		8 00	8 50
Cumin, American		4 00	6 00
Fennel		85	—
Seed		1 50	—
Geranium, Turkish		2 50	3 50
Rose, French		6 50	10 00
Gingergrass		2 25	—
Juniper, once rect		—	1 00
Twice rect		1 50	2 00
Wood		27	37
Lavender, Garden		45	70
Flowers		1 25	55
Flowers, Charras		1 40	60
Lemon		1 15	1 85
Lemongrass		60	70
Neroli, Bigarade		45 00	—
Portugal		27 50	—
Petale		50 00	—
Nutmeg		2 25	2 50
Orange, Sweet		1 15	1 70
Bitter		1 65	4 00
Origanum		20	23
Charras		10	14
Peppermint, tin cans		2 45	2 75
cases		3 30	3 35
A. M. T. crystal white		4 25	—
Pennyroyal		70	75
Rose, Jhansen's	℔ oz	5 87½	6 00
Holstein's		5 50	5 75
Rosemary, Trieste	℔	60	—
French		—	40
Flowers		70	1 10
Flowers, Charras		80	1 10
Sandalwood		2 25	10 50
Sassafras		33	36
Spearmint		5 75	6 25
Tanzy		2 50	3 00
Thyme, Red		21	87½
White		80	1 10
Wintergreen		2 00	2 10
Wormseed		1 20	1 30
Wormwood		4 00	5 00

Flowers.

Arnica	℔	8	8½
Chamomile, German		16	30
Roman (new)		15	16
Insect		38	42
Lavender		3	7
Rosemary		15	20
Saffron, American		15	16
Alicante		8 00	8 50
Valencia		13 00	13 50

Gums.

Aloes, Cape	℔	5½	7
Barbadoes		19	25
Curacao		5½	6
Socotrine		40	52
Arabic, 1st picked		92½	95
2d picked		82½	85
3d picked		72½	75
4th picked		62½	65
5th picked		52½	55
6th picked		34	35
Sorts		57½	65
Siftings		28	40
Senegal		30	47
Asafoetida		9	10
Benzoin		30	45
Camphor, refined, in bbls		23	23½
in cases		24	24½
Chicle		—	36
Euphorbium		15	17
Gamboge, pipe and block		67½	79
Gedda, Siftings		—	—
Sorts		—	23½
Guaiac		18	25
Kino		11	12
Mastic		90	1 00
Myrrh		22	35
Olibanum, Tears		15	10
Sorts		6½	7½
Sandrac		24	28
Scammony, Aleppo		25	3 75
Virgin		7 50	—
Tragacanth, Alleppo, 1st flake		46	47
2d flake		43	—
3d flake		—	40
Turkey, 1st flake		75	80
2d flake		57½	60
3d flake		45	47½

Herbs and Leaves.

Aconite	℔		7
Althea		8	10
Belladonna		10	12
Buchu, Short		7	10
Long		20	25
Coca		25	40
Damiana		28	—
Digitalis		7	7½
Eucalyptus		4½	6
Grindelia Robusta		12	14
Henbane, (Hyosciamus)		10	17
Horehound		7	9
Jaborandi			12
Laurel		3½	4
Lobelia		4	7
Matico		20	22
Marjoram, German		14	30
French		9	11
Prince's Pine		—	8
Rose, Red		30	40
Pale		21	40
Rosemary		3	4
Sage, Italian		3	3½
Senna, Alex. Nat		30	32½
Siftings		30	45
Garbled and sifted		35	42½
Tinnivelly		12	25
Thyme		4½	10
Uva Ursi		4½	5
Yerba Santa		12	14

Roots.

Aconite	℔	10	12
Alkanet		8	10
Althea, Whole		12	12½
Cut		16	—
Angelica, German		10	12
American		9	10
Arrowroot, Bermuda		31	35
St. Vincent, bbls & cans		9	11
Jamaica		10	11
Arnica		—	12½
Belladonna		13	14
Blood		9	10
Burdock		7½	8
Calamus, Bleached		—	40
Unble'd, split & peeled		7	10
Canada Snake select		34	38
Colchicum		—	10
Colombo		8	11
Culvers		15	16
Dandelion, German		10	12
American cut		11	12
Elecampane		6	8
Galangal		4	4½
Gentian		3½	4
Ginseng		1 75	1 85
Ginger, Jamaica, Unbleached		11	12
American, Bleached		13½	14
London Bleached		14½	15
Golden Seal		16	18
Hellebore, White, powdered		—	9½
Whole		5	7
Ipecac, Rio		1 75	2 00
Jalap		11	13
Kava Kava		28	30
Lady Slipper		13	15
Lovage, American		40	50
German		9	20
Licorice, ordinary		5	7
selected, in bdls		12½	20
Mandrake		—	5
Orris, Florentine		7	9
Finger		42	75
Verona		4½	4½
Pareira Brava		12	13
Pellitory		16	18
Pink		42	45
Rhatany		5	5
Rhubarb, Whole		20	65
Cut		65	2 50
Sarsaparilla, Honduras		22½	30
Mexican		7½	9
American		6	8
Senega Southern		28	—
Western		32	34
Serpentaria, Texas		22	24
Stillingia		8	10
Squills, ordinary			9
white, prime		8	9
Valerian German		9	10
Belgian		10	12
English		—	17
Vermont		10	11
Yellow Dock		7	9

Seeds.

Anise, Italian	℔	12½	13
German		—	—
Star		—	20
Canary, Sicily		3½	3½
Smyrna		2½	2¾
Spanish		3½	4
Caraway, Dutch		3½	3½
German		—	—
Cardamom, Alleppy		60	80
Malabar		75	1 00
Mangalore		80	1 80
Celery		9½	9½
Colchicum		—	12½
Clover		9	11
Coriander, English		5	6
French		—	—
German		4	—
Cummin		13	13½
Fennel, German		9	9½
Fœnugreek		2½	2¾
Guinea Grains		—	6
Hemp, Russian		2	2½
Smyrna		—	—
Lobelia		25	30
Millet, Domestic	℔ bush	1 10	—
Foreign	℔	1½	—
Mustard, California yellow		4½	4¾
Dutch		5½	6
English		5½	6
Trieste brown		7	8
Poppy		6½	9
Quince, German		55	60
Russian		28	30
Rape, Domestic		2½	3
English		4	3½
German		3½	3½
Timothy		2½	2½

Shellac

D. C.	℔	16½	17
Octagon B		13½	14
H. S. L		—	—
V. S. O.		13	1 ¼
Diamond I		13½	14
S. S		13	13½
Garnet, A. C		11	11½
T N Quality		10	11¼
Button		15	16
Bleached		17	19

Spices.

Cassia, Batavia	℔	6½	7
China		4½	5
Saigon, rolls		36	40
broken		29	30
chips		9	10
Buds		10½	11
Cloves, Prime, Zanzibar		24	25
Amboyna		—	27
Stems		5½	6
Ginger, African		4	4¼
Calcutta		3½	4
Cochin		7½	11
Mace, Batavia		—	63½
Banda		—	70
Penang		—	70
Nutmegs, 110s		—	65
Pepper, Singapore		16¼	16¾
West Coast		15	—
Acheen, prime		14¾	15
Penang, white		—	23½
Singapore, white		27	28
Red, Zanzibar		—	8
Bombay		—	6½
Pimento, Prime		—	4½

Sponges.

Glove	℔	25	60
Slate		45	85
Carriage, Yellow		45	60
Velvet		65	80
Cuba S. W		1 80	2 40
Nassau, S. W		1 65	—
Florida, S. W. Natural		2 75	3 50
Reef, No. 2		80	1 00
No. 1		1 15	1 25
Coupee, Bathing		1 40	1 80
Small "		1 00	2 00
Forme "		2 50	5 00
Zimoca, Small		1 15	3 00
and Medium		2 00	2 25
Potters		2 75	3 25
Toilet Potters		3 75	5 00
Shoe Sp		2 75	6 50
Duree Shoe Sp		2 25	3 75
Cup, each ℔ piece		25	4 00
Surchoise, Bath, on Strings		4 00	24 00
Cavalier,, on Strings		2 00	3 50
French & Eng. Chamois	℔ kip.	1 00	30 00

Chemicals.

Heavy Chemicals.

Alkali, 36 ℔ cent		1 18½	1 12½
Refined, high test		1 05	1 12½
Bleach, over 35 ℔ cent		1 87½	1 95
Salt cake		60	65
Soda ash, Carb, 48 ℔ cent		1 10	1 25
High test		1 15	1 25
Caustic, 48 ℔ cent		1 17½	1 35
High test		1 15	1 20
Newcastle, 48 ℔ cent		1 17½	1 20
High test		1 10	1 20
Bicarb, English		3 10	3 35
American		3 00	3 50
Carbonate		1 75	1 80
Caustic, 60 ℔ cent		2 70	2 80
70 ℔ cent		2 45	2 47½
74 ℔ cent		2 45	2 47½
76 ℔ cent		2 90	3 00
Sal, English		95	1 12½
American		80	85

Acids.

Acid, Acetic		2½	2¾
Chemically pure		16	17
Pure		5½	6½
Oxalic		8½	8¾
Sulphuric, 60 deg		90	1 00
66 deg		1 15	1 20
Muriatic, 18 deg		1 15	1 20
20 deg		1 30	1 50
22 deg		1 40	1 83
Nitric, 36 deg		4	5½
38 deg		4½	6
40 deg		5	6½
42 deg		5½	7
Tartaric, Crystals		43½	44½
Powdered		44½	45½

Ammonias, Potashes and Fertilizing Chemicals.

Ashes, Pot, 1st sorts	℔	4	4¼
Pearl		5	5¾
Potash, Chlorate, English		15½	15½
Powdered		15½	15½
Carb		5½	5½
Caustic		7½	7¾
Sulphate of Potash		1 07½	1 10
Aqua Ammonia (in obys) 16 deg	℔	3½	3¾
18 deg			4¼
20 deg			6
22 deg		6	7
26 deg		10	11
Ammonia, Muriate		6½	8
Sal		8	8¼
Sulphate		2 95	3 00
AMMONIATES, ETC:			
Azotine, per unit		2 25	2 35
Blood, Dried, Red, ℔ unit		2 10	2 25
Black, ℔ unit		2 10	2 25
Bones, Rough, ℔ ton		22 50	23 00
Ground, ℔ ton		29 00	30 00
Bone Black, refuse, ℔ ton		18 00	19 00
Kieserite		5 50	5 75
Menhaden Guano		27 00	
Grand Caymans Phosphate Guano, per unit		—	—
Phosphate Rock, f. o. b. Charleston		5 75	6 00
Phosphate Rock, f. o. b. New York		8 00	8 50
Phosphate Rock, ground		9 00	10 00
Acid Phosphate		13 00	15 00
Potash Muriate	℔ 100 lbs.	1 70	1 75
Kainit	℔ ton	7 75	8 00

Miscellaneous.

Acetate of Lime, American, Gray		2 45	2¾
American, Brown		1 80	1 85
Alum, Lump		1½	1¾
Ground		1½	2½
Cake		1½	1¾
Argols, Crude Oporto		—	—
Plate		23	24
Half Refined		23	32
Arsenic, White		2½	3
Red		6½	6¾
Brimstone Crude, best 2ds		18 75	19 50
best 3ds		17 75	18 00
Copperas, Ordinary		65	85
Best grades		1 20	1 30
Powdered		1½	1¾
Cream Tartar, French, in bond		—	—
American, 99 p. c.		34½	35
Powdered, 99 p. c.		35	38
Glauber Salts		75	80
Epsom Salts		1 15	1 20
Nitrate of Lead		9	10
Soda		1 80	1 90
Rochelle Salts		30½	31½
Sugar Lead, Brown		8½	8¾
White		12	12¼
Liquor, White			—
Saltpeter, Crude		4½	4¾
Refined		6	8
Vitriol, Blue Ordinary		4½	4¾
Extra		4½	4¾

Philadelphia Chemical Prices

Soda Ash Carb, 48 per cent	1 30	1 40
58 per cent	1 27½	1 40
Newcastle, 48 per cent	1 20	1 30
Caustic, 48 per cent	1 35	1 40
Caustic, 60 per cent	2 75	2 85
70 per cent	2 52½	2 65
74–75 per cent	2 52½	2 66
76 per cent	2 52½	2 65
Bicarb	3 15	3 50
Crystals	99¼	1 10
Refined alkali, 36 per cent	1 12½	1 30
48 per cent	1 20	1 30
Pure alkali, 58 per cent	1 20	1 90
Bleaching powder	1 97½	2 10
Nitrate soda	1 85	2 17½
Potash chlorate	15½	16¼
Muriate	1 75	1 85
Carb	5½	6
Caustic	7½	9
Brimstone	18 00	22 00

Dyestuffs.

Acid Picric best crystal	℔	46	50
Albumen prime egg		33	35
imported blood		17	17½
domestic blood		16	17
No. 1½ blood		14½	15½
Alizarine ass't		10	30
Annatto		12	25
seed		10	16
Archil Weed		7	15
Aurine		58	63
Barbary Root, cut		4	—
Bichromate of Potash, Scoton		10½	11
American		10½	11
Bichromate of soda		8½	9
Carmine of Indigo		40	
Cochineal, Teneriffe Silver		30	32
Black		32	34
Gray black		35	37
Mexican		—	35
Ammoniac		—	37
Cudbear, French		12	—
Concentrated		25	18
English		12	30
Cutch slab		6½	6¾
bag		7½	8
Dextrine		4½	4¾
Divi Divi	℔ ton	50 00	60 00
Fuller's Earth, lump	℔ lb	90	95
powdered		1¾	2
Flavine		21	23
Fustic stick	℔ ton	20 00	23 00
Gambier	℔ lb	5	5½
Garancine		8½	9
Indigo, Bengal, low grade		95	1 00
medium		1 05	1 12½
high grade		1 25	1 40
Caracas		—	—
Kurpahs		75	1 05
Guatemala		72½	80
Manila		70	75
Madras		65	85
Indigotine		3 00	4 00
Lac Dye		9	15
Logwood stick	℔ ton	25 00	35 00
Madder, Dutch	℔ lb	7½	8
French		5	7
Myrabolans		2	2½
Muriate of Tin		8	10
Nitrate of Iron, commercial		2	3
true		5	6
Nutgalls, Blue Aleppo		14½	15
Chinese		14½	15
Oxymuriate of Antimony		4	6
Persian Berries		21	26
Prussiate of Potash, Am. Yellow		18½	19
Red		42	45
Scotch, Yel.		19	20
Red		43	45
Prussiate of soda		17½	18
Phosphate of soda		7	8
Safflower		—	—
Sago Flour		3½	3¾
Salts of Tartar		6½	7
Soluble oil		—	6
Sumac, Sicily prime	℔ ton.	70 00	75 00
Virginia		50 00	55 00
Starch, Corn	℔ lb	2½	2¾
Potato		3½	3¾
Wheat		6½	6
Stannate of Soda, 50% soluble		—	lb
40% soluble		—	13
25% soluble		—	9
20% soluble		—	8
Tin Crystals		15½	16¼
Turmeric root Alleppy		3	3¼
Benga		—	—
Corringa		3	3½
powdered		5½	6
Ultramarine, imported		20	30
American		5	16
Vanadiate, Ammonium		2 75	2 85
Woad, English		9	10
COAL TAR COLORS:			
Alizarine		19	20
Aniline Oil		20	25
Salt, crystals		16	18
cake		20	21
Bismarck brown		80	1 20
Eosine		2 40	3 00
Fast red		50	65
Fast yellow—acid		75	1 50
Fuchsine crystals		1 25	1 75
Hoffmann's violet—3B		1 75	2 50
Methylene blues		4 50	6 75
Methyl violets—2R		1 50	2 00
2B		1 50	2 00
B		1 50	2 00
Nicholson (alkali) blue—3B		2 25	3 00
5B		3 75	4 00
Red shade		2 00	2 25
Nigrosine		1 35	2 00
Orange A—II		40	65
Safranine		1 75	2 25
Scarlet R		45	55
RR		50	65
RRR		70	75
Soluble blue—Green shade		2 00	3 50

These prices are for colors of standard purity in original packages. Reduced colors can be obtained at irregular and very much reduced figures.

CHIPPED DYEWOODS, ETC			
Barwood	℔	2	2¾
Camwood		4½	8
Fustic, com		1½	1¾
Cuban		1½	1¾
Green Ebony		3½	4
Hypernic		3½	4¼
Logwood Campeachy		1¾	2¼
Laguna		2	2¼
Nicwood		—	—
Peachwood		—	3
Quercitron		—	1¾
Redwood		—	2
Red Sanders		—	3¼
EXTRACTS:			
Archil	℔ lb	12	20
Concentrated		21	33
Black Oak		3½	—
Barberry, French		26	28
Chestnut		5½	6
Chestnut Oak		3½	—
Refi'd Sedementless Hemlock		8	—
Prime Hemlock		9½	10
Fustic, solid		10½	11
liquid, 51 deg		8	9¾
Indigo Extract		7½	9
Logwood, solid		8½	9
liquid, 51 deg		5½	6
43 deg		5½	5½
Madder		8½	9½
Persian Berries, French		22	—

low saline particles begin to form upon the surface. The pasty mass is then quickly dissolved by the addition of warm water. With some practice, the whole operation requires not more than 10—15 minutes.

The cool solution is diluted to 250 c.c. and filtered through a dry filter. 200 c.c. of the solution, corresponding to 10 gms. of pyrites, which are now free from silica and lead, are treated for several hours with a current of hydrogen sulphide until the precipitate cakes together and the solution becomes clear. The precipitate is filtered off and washed with water. Water containing hydrogen sulphide is not necessary if the gas has been allowed to act until the precipitate settles readily and the solution has a bright appearance.

The precipitate upon the filter is washed back with the smallest possible quantity of hot water and enough sodium sulphide solution is added to hold all sulphur in solution after boiling for a few minutes. The solution is then diluted with hot water and left to settle in a warm place. The solution which contains all the arsenic and antimony is then filtered from the copper sulphide and the latter is washed with hot water. Traces of ferrous sulphide which always adhere to the copper sulphide—in two cases 0·02 per cent of the pyrites used was found—are extracted with hot water to which a few drops of hydrochloric acid are added. The purified copper sulphide is then washed until free from chlorine and weighed as such. The copper sulphide is then tested for cadmium and bismuth by dissolving in nitric acid and treating the warm solution for some time with ammonium carbonate. Any precipitate that may be produced is weighed as oxide and subtracted from the copper sulphide.

To determine the arsenic the dissolved hydrogen sulphide is removed from the saturated pyrites solution by a current of carbon dioxide, and the arsenic sulphide is dissolved out of the precipitate by ammonium hydroxide. The further treatment of the solution can be effected in two ways, either by precipitating volumetrically according to the method of Cay, as silver arsenate, or gravimetrically by oxidizing with hydrogen peroxide, and precipitating with magnesia mixture according to the method of B. Fischer.—*Chem. Ztg.*

The World's Production of Sponges.

Le Memorial Industriel states that the production of the sponge fisheries in the various parts of the world is valued at £400,000, composed of £280,000 for the products of the Levant, Syria, Tunis, Tripoli and the Isle of Cyprus, and £120,000 for those of the Bahamas Florida and Cuba. France imports from the Levant from £160,000 to £200,000 worth, and about £80,000 worth from the Bahamas and Cuba. England and the United States are said to absorb the Florida and Cyprus sponges. The transit of sponges from the Levant is made by Marseilles, and from the Bahamas and Cuba by St. Nazaire and Havre. The French packet boats of the Transatlantic Company bring about 200 bales of sponges monthly, pressed like bales of cotton, of which the weight is from 60 to 80 kilos per bale. The Cuban sponges are stated to be growing in popularity, owing to their good quality as well as their low price.

The Essential Oils and Essences and their Preparations.

Among the exact sciences there is none that can show such progress during recent years as chemistry. Entering into the various trades, its cultivation plays a most important part in the evelopment of a whole series of industries, which aided by the conquests of chemical investigation, have reached a flourishing condition that was never anticipated. What, for example, would our present textile industry be without the highly developed industry of artificial coloring matters, the manufacture of which in Germany is excelled in no other country. The Germans are called a nation of thinkers, but where could the truth of this expression be better and more clearly shown than in the grand success which chemical science has celebrated and continues to celebrate. That it must exert a great influence upon all practical life is due to the fact that chemistry is an exact science, i. e., a science which aspires to accurately determined and demonstrated knowledge. It desires to calculate with facts only, and based upon facts to originate ideas, which spreading a bright light will awaken new life.

Chemistry is divided into two principel divisions, namely, organic and inorganic. The latter does not concern us here. The essential oils and essences belong to the province of organic chemistry, or as it is not improperly called, the chemistry of carbon compounds, for all organic compounds contain carbon, to which they essentially owe their combustibility, while on the other hand inorganic compounds are incombustible. We therefore have in the essential oils and essences organic compounds which consist almost exclusively of carbon, hydrogen and oxygen, but nevertheless appear in numberless varieties in nature, who in her mysterious workshop produces the elements in extraordinary numbers. The odor which is given off by the flower, leaf, fruit, wood or root, and agreeably or disagreeably affects our sense of smell is generally due to the presence of an essential oil, the isolation of which is the work of the manufacturer. The manufacture of these oils is not new and it may be assumed that the art was practiced more than 2,000 years ago by Eastern nations. We will only need to recall for example that the Chinese, who can show the longest period of uninterrupted culture, prepared camphor, which is classed among the essential oils, since most ancient times. In the Bible we find undoubted indications of the use of certain odorous principles. Roses were cultivated for the preparation of attar of rose in the Euphrates Valley in the earliest times.

During the middle ages, the art of manufacturing essential oils was much advanced in Europe, by alchemistic studies. At that time, a whole series of essential oils was already known, and they were used for various purposes. More recently, as stated above, it was the development of chemical science, which extended our knowledge of the essential oils. It was not only, however, that the gifts of nature, which are particularly abundant, and of the greatest variety in the tropics, were used for the manufacture of essential oils, but they were also studied as to their composition. Attempts were successfully made to improve the oils, by separating and and isolating their most valuable constituents. Oils were also artificially (prepared(and finally they were obtained from substances, which contain no essential oil as such, but in which they are produced, by a kind of fermentation. From the brief indications it will be apparent, what a large field of study and labor the essential oils present. These oils in turn supply the material for the manufacture of essences. The picture is however considerably enlarged, when we consider what a large number of industries use essential oils, and essences. These are the liqueur and liquor manufacturers, candy makers, soap makers, perfumers, mineral water manufacturers, porcelain decorators, tobaconists, the manufacturers of all kinds of medicinal preparation and apothecaries. Wherever the beginnings of an industry are observed, essential oils are used, and the more the industries are developed, the larger will be the consumption of essential oils and essences.

To avoid errors, it should be stated, that essences are preparations, which contain alcohol though often in small quantity, and that essential oils are free from the same. Because the essences are chiefly prepared from the essential oils or from the materials from which these are obtained we will first describe the essential oils and their manufacture, and the manufacture of the essences.

The essential oils are divided into 3 large groups, namely: those which are free from oxygen, those containing oxygen, and those containing sulphur. The latter group is very small, having but few representatives, the most important of which is oil of mustard. It is obtained from mustard seed by distillation. The seed does not naturally contain the oil but produces it by a process of fermentation. The group of oxygen free essential oils is continuing to diminish. Recent investigations, in which, as will be seen below, Mr. G Haensel has taken an important part show that almost all essential oils contain, and that the oxygen is the bearer of the aroma. The oxygenated oils, consequently form the most numerous group, and include the most valuable products. All essential oils are obtained by distillation. It was formerly supposed that the raw materials, which contain essential oils in large proportion, could be more advantageously extracted by means of ether or carbon disulphide. It was, however, found, that the solvents extract other compounds with the essential oils, so that the final product does not possess the same fine aroma as when obtained by distillation. It is for this reason that all essential oils manufactured at the works of Hein, rich Haensel, at Pirna-on-the-Elbe, Germany are exclusively made by the latter process. For this purpose fifteen large apparatus are in continual operation, the largest having a capacity of more than 2 000 liters. The construction of the apparatus differs according to the purpose for which it is to be used, and is in many cases very complicated. When we look at one of these complicated apparatus, and think of the first stills which were in use by the ancients, such as that invented by Dioscorides, a contemporary of Tiberius, and described by the Arab physician Albucasis, we are astonished at the inventive genius of the human mind.

Before the seeds, roots, spices, leaves, woods, etc., can be subjected to distillation they must undergo a preliminary treatment in rooms specially arranged for the purpose. These contain various kinds of mills, all operated by steam power. After the raw materials are properly prepared they are brought into the still-house. Here we find in the receivers, so-called Florence flasks, not only the essential oil of domestic products, such as fennel seed, coriander seed, angelica seed, chamomile, spearmint, marjoram, calmus, etc., but also the products from the wood of the cedar of Lebanon, laurel from Italy, orris from Russia, sandel wood from India, caraway seed from Holland, cinnamon, mace and cardamom from India, etc. It would lead us too far to mention all the raw materials which are treated for essential oils. But not only that these oils are directly obtained, they must also be subjected to the most careful rectification, in order to obtain the state of purity and excellence in which they are brought into commerce.

The essential oils obtained directly from the raw materials are called "simple," while those consisting of several oils are called "compound." The latter are preparations which are principally used in the manufacture of liquors, soaps and perfumery. For the manufacture of liquors alcoholic essence can advantageously be used. These will be described further on. For the manufacture of perfumed soaps and cheap perfumery, the compound essential oils, such as eau de cologne oil, Eau de Lavande oil, Mille fleurs oil, etc., are to be highly esteemed, and may be employed advantageously. Artificial essential oils are also prepared as purely chemical products, and of these may specially be mentioned oil of wintergreen and Niobe oil. Patent essential oils were first placed before the public at the Centennial Exhibition in Philadelphia in 1876. As a novelty they caused a general sensation, and supplied evidence of the fact that there are new methods open to the manufacture of essential oils. The collection of these preparations exhibited in Philadelphia gave a turning point in the whole essential oil industry, which after some violent opposition was acknowledged by competitors. The apparatus which was used in the manufacture of these new products was patented by Gustav Haensel, who since then diligently continued his labors in perfecting the same.

Although the essential oils, like those of lemon and orange, have been classified with the oxygen free oils. Haensel has shown that this assumption is erroneous, because he prepares oils of lemon and of orange containing oxygen, which are characterized by a hitherto unknown and extraordinary intensity. It is hereby proven that the mentioned oils not only contain oxygen, but that the oxygen is the bearer of the aroma in essential oils in which chemists did not detect oxygen, and which were considered free from oxygen. Haensel's method of manufacture make it possible to completely remove the terpenes, which are compounds of carbon and hydrogen from the essential oils. This separation becomes more difficult, as the excess of the terpenes increases over the oxygen compounds. If we consider that the atomic weight of hydrogen is 1, that of carbon 12, while that of oxygen is 16, it follows that the oils which are completely freed from the hydrocarbon compounds must be specifically heavier than those which contain these valueless constituents. The patent essential oils are characterized by the fact that they are actually free from the hydro-carbon compounds, and it is for this reason that they possess not only the strongest, but also the finest aroma.

Since the hydro carbon compounds are also very difficultly soluble or insoluble, while the oxygen compounds of the essential oils are soluble, the extraordinary advantage of using the patent essential oils is explained. This is especially the case in those industries in which weak alcoholic solutions must be prepared; for example, in the manufacture of liquors and mineral and toilet waters. It is apparent that these oils are also of great advantage for pharmaceutical purposes. The patent oil of caraway or Carvol, in a state of highest purity, has already been admitted in the Pharmacopœia Germanico, *editio altera*.

As has already been stated in the beginning, the term "essences" is here applied to products containing alcohol, even if only in small quantity, and in order to avoid any misunderstanding, this is again expressly stated. Without considering their greater or lesser strength, the essences are divided into three classes:

1. Those which only contain the volatile constituents of the raw materials.
2. Those which, in addition to the volatile constituents, contain some of the extractive matter of the raw material.
3. Those which essentially consist of ethers.

The essences of the first class are colorless or slightly yellow, and are obtained by distillation. They include a large number of essences used in the manufacture of liquors which are prepared in simple and concentrated form. As examples we may here mention caraway essence, anisette essence, allasch essence, lemon essence, Genevre essence, juniper essence, etc. Of all these essences a single unit is required for the aromatization of brandies and liquors; that is to say, one uses as much of one kind as of another. Of the simple essence 1¼ kilo is used for 100 litres, and of the concentrated ¼ kilo is used for 100 litres. Although it is not intended to be said that these quantities are the best proportions under all circumstances, for the requirements often vary greatly, they will be found satisfactory in most cases. At least they will suffice as a guide in accurately determining the proper proportions.

These distilled essences are also highly prized because in consequence of the method of manufacture, the aroma is delicate and very fresh. The raw materials are extracted by alcoholic vapors, thus extracting volatile aromatic constituents in a state of solution. This also prevents any injurious action by the exclusion of atmospheric oxygen. As an example, I will describe the preparation of Genevre essence. This is made by mashing the cereals, and distilling with the addition of juniper berries, coriandar seeds, &c. The method of proceeding is the same as in the case of essences of the first class, and in consequence of this conformity, the final products must be the same. If now the alcohol to be used in the preparation of the Genevre was well purified, there will be obtained by the use of the essence a product which will be equally as good as if the were directly distilled as such. We should not omit to mention the essence prepared for the manufacture of eau de cologne. This essence is also prepared by distillation, and therefore an excellent article.

The second class of essences includes, as stated above, those varieties, which in addition to the volatile constituents of the raw material contains some of their extractive matter. To the latter is due the color of these essences. The extractive matters are not volatile, and therefore can not be obtained by distillation. They are separated from the raw material by special extraction apparatus. The extractive matters also possess the specific taste and specific aroma of the raw materia', but this aroma is is of an altogether different character than that which is obtained by distillation. It has not the odor and delicacy of the volatile constituents. The product obtained by extraction is coarser, the taste is stronger, but as a base it is indispensable in many cases. It forms a foil, which sets off the volatile bouquet, and through wich the latter aquires its full appreciation by forming with it an harmonious whole. To find this and to reach it, is one of the chief problems for the manufacture of essential oils and essences, for as soon as the harmony is lacking, the consumer of liquors prepared from such essences will be dissatisfied. According to the peculiarity of the aroma to be produced, the essences are prepared simple or concentrated, for the nature of the extractive matters does not always permit their being reduced to the same small volume; moreover, a careful examination must be made in this respect. The quantities which are required of this second class of essences for aromatizing liquors and brandies, can not, as is the case in the first class, be reduced to a uniform proportion, but varies greatly. To the class just described belong all the bitter essences. Most of the so-called international liquors can best, and most excellently be made from these essences.

It is a mistake to suppose that similar results can be obtained by the use of essential oils. Liquors like angostura, boonekamp, benedictine, chartreuse, coca, ginger, cacao, coffee, &c., can only be made in a proper manner and so as to satisfy the consumers, by using essences of the finest quality procurable. The tinctures manufactured form a desirable complement to this second class of essences. These tinctures contain the volatile constituents and extractive matters of a drug, and therefore give the natural taste of the raw material. They are prepared in a uniform proportion. The number and variety of these tinctures is very large. They are made from all kinds of raw material, for example: Galangal root, orange peel, pepperwort, nutmeg, quassia wood, elder blossoms, wormwood, &c.

I now come to the third class of essences, namely, those which consist essentially of ethers. It would exceed the limits of this article to enter upon an exhaustive explanation of this term, but it may not be out of place to make a few remarks upon the origin and properties of alcohol oxides. In the first place it is necessary to state that there is not, as the layman generally supposes, only one kind of alcohol, by which name the alcohol contained in beverages is generally known. There exists, moreover, a whole series of alcohols, which are called homologous, because their elementary composition varies between certain limits. In this series, the well known spirit, the alcohol which is found in beer wine, cider and brandy, and which is their active agent, takes the second place, and is here called ethyl alcohol. The first member of the series is methyl alcohol, the third propyl alcohol, the fourth butyl alcohol and the fifth amyl alcohol. When these alcohols are treated with oxidizing agents, i. e., substances which give up oxygen, particularly with acids and their salts, new bodies are produced which possess properties altogether different from the substances employed. The new bodies are the ethers, and they are characterized by ther odors, which represent the natural aroma of fruits. If we consider the difference between the various alcohols, and the numerous oxidizing agents, we can easily conceive what a large number and variety of fruit essences can be prepared by the oxidation of the alcohols. These artificial fruit essences are particularly used in the manufacture of confectionery and bonbons, and are of great value on account of their extraordinary strength.

Upon the oxidation of alcohols is also based the manufacture of rum essences, to the preparation of which much care is given. The natural rum, as is well known, is a product of distillation obtained by distilling fermented sugar cane, or the molasses from the same. The alcohol consists principally of ethyl alcohol. During the fermentation of the sugar cane, other alcohols are also produced which are oxidized by the organic acids contained in the sugar cane, thus producing the bouquet of the rum. The rum essences are intended to replace this bouquet, and this object may very well be attained when the manufacture of the rum essences is conducted in the proper manner.

The Cognac essences, which should be mentioned here, require a somewhat modified method of preparation, for it has been found that the commercial cognac oil is unfit for the preparation of an article similar to natural cognac. The products of the grape can not be dispensed with in this manufacture, and they are extensively used in the preparation of cognac essence.

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CHEMICAL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 50.

TUESDAY EVENING, July 12, 1887.

There has been a gradual improvement in trade during the past week, and for the month of July business may be considered fair. In this improvement the heavy chemicals have not shared to any appreciable extent. There has been a very good demand for the higher tests of caustic soda, and bleaching powder and sal soda are much firmer, but beyond this there is nothing worthy of special mention. Dealers in the lighter goods are finding a better outlet for their goods, but they do not succeed in getting better prices. Trade in the acids is moderate, but the fertilizer chemicals are dull and neglected, with prices to a large extent nominal. Advices from abroad regarding the heavy chemicals are to the effect that little change has occurred in the position. Letters to the 2d inst. quote a rather firmer feeling in bleaching powder and cables since then have reported an advance. Soda ash on the 2d was quiet in Liverpool, caustic soda was tending downward and sal soda was scarce and firm.

Heavy Chemicals.

Liverpool carbonated soda ash has remained very quiet since our last. Buyers when they have shown an inclination to operate have placed their limits so low that business has not been possible, and though holders have manifested a disposition to meet them in the past they seem now to have reached bottom and prefer to hold their goods rather than make further concessions. For 48 per cent the nominal quotation as to brand is 1 20@1 25c on the spot, but for lots to arrive less would be accepted, and we hear that some transactions have been completed at about 1 15c. High test is nominally quoted at 1⅛@1 15c, but there is nothing doing.

Caustic soda ash is also very quiet. For 48 per cent there is little or no demand and the few inquiries received are at prices too low to be entertained by sellers. The latter are not anxious apparently to dispose of their stock, expecting an improvement in the demand later on. For small lots from store holders realize 1 25@1 30c as to quantity, though they would probably shade the inside figure on a large transaction. Lots to arrive receive very little attention and prices remain nominally 1 17½@1 20c, as to holder and quantity. In high test there is nothing doing so far as we can learn, and prices are entirely nominal at 1 10@1½c. Writing from Liverpool under date of July 2, Messrs. J. P. Brunner & Co. say: "Soda ash is very quiet, and, although some makers say they are very well sold for this month, there is little fresh business to report. Nearest spot values are 15 10@1d for 48 per cent and high test caustic ash, 15 18@1 1-16d for 48 per cent carbonated ash and 15 10@11 for high test carbonated."

Newcastle soda ash is without animation. There is no inquiry from the glass makers, and other consumers are taking little or nothing. The market is barely steady, but there has been no quotable change and prices remain nominally the same as when we last wrote. We quote 48 per cent at 1 17½@1 20c either on the spot or to arrive, and high test at 1 15@1 17½c.

Refined alkali 58 per cent has sold to a moderate extent in small lots to supply passing requirements but there are no buyers of large quantities in the market. The nominal quotations remain 1 1-¾@1 20c but it is probable that these figures would be shaded. B M 58 per cent is in fair request and being in rather small supply is firmly held at 1 10@1½c on the spot though procurable at less to arrive. For 48 per cent there is not much inquiry and the quotations of 1 15@1 20c are more or less nominal.

Caustic soda 60 per cent is neglected the only business transacted since the date of last writing being of a light jobbing character. For such lots holders obtain 2 70@2 75c but larger quantities could be had at something less. In the higher grades, particularly 74 per cent, there has been a good business done and we have to report sales of 400 drms at 2 40@2 42½c spot and to arrive. In 70 per cent. there is a fair trade though it is principally of a jobbing character. Prices are steady at 2 40@2 42½c. Seventy six is in fair jobbing request at about the same figures. Messrs. Brunner & Co., writes from Liverpool on the 2d inst: Caustic soda continues to tend downward and sales of 70 per cent. have been made at £7 15s. and of 60 per cent. at £6 15s, although several makers still hold for 1s 3d advance on these figures. We quote: 74 per cent £8 6s 8d to £8 7s 6d. 76 per cent £9 10s to £10.

Sal soda continues to improve on the spot owing to the limited available supply present and prospective. Small lots from dock are available at 1c but for store parcels 1⅝c is now demanded. Lots to arrive are not procurable below 95c. The demand, though good, is not urgent, buyers appearing to be satisfied with enough stock to supply current requirements. Advices from abroad are to the effect that supplies there are very light and prices extremely firm, £2 1s being the lowest figure quoted as acceptable by the manufacturers.

Bleaching powder is also doing better, so far as prices are concerned, but there is not much life to the demand. Cables from the other side report an advance there to £7 12s@7 15s, and holders here are accordingly stiffer in their views. The demand, however, is almost entirely of a jobbing character and we have heard of no sales of consequence during the week. Messrs. J. P. Brunner & Co., of Liverpool, write us under date of the 2d inst.: "Bleaching powder is rather better, the pressure to sell having been removed owing to a large quantity being taken off the market on account of the London sanitary requirements. Sales of hardwood have been made for America at £7 10s and for one especial brand at £7 12s 6d and the higher figure is now the general asking price. It is not easy to get hardwood, as manufacturers are packing mostly in softwood packages."

American sal soda is in active jobbing request, but we find no new features to report. The market is very firm, the manufacturers still quoting 80 285c f o b, less 1½ per cent for cash.

Acids.

The demand for acetic acid continues fair for the season, but there are no large buyers in the market and no disposition is shown to anticipate requirements. The manufacturers are still engaged on contract deliveries, and as there is no surplus stock the market remains firm. The reported transactions for the week aggregate about 45,000 lbs within the previously quoted range of 2¼@2¾c as to quantity.

Oxalic acid is without change. There is a fair movement into the ordinary channels of consumption and prices are sustained at the combination rates. We repeat our quotations of 8c for lots of 10 tons or over for future delivery and 8½c for smaller quantities.

Tartaric acid is in good demand, as usual at this time of the year, but there is no special activity and sales are mostly of moderate quantities to supply the passing needs of consumption. There is no change in quotations, the combination prices remaining 44@46c for powdered and 43@45c for crystals in barrels and boxes respectively.

Muriatic acid is moving fairly in accordance with the wants of the trade and may be written steady. Nitric is wanted to a moderate extent in a jobbing way, and sells at our former quotations.

Sulphuric acid is without particular animation, buyers taking only what their current needs dictate. The quotations remain as when we last wrote, no action looking to an advance having yet been taken by the manufacturers. 66 degree sells in lots at from 1@1 20c according to size of order, but the larger buyers are supplied at 90@95c. For chamber acid there is a steady though moderate demand which is supplied at $7 50@9 per ton according to seller, quantity and place of delivery.

Miscellaneous.

Acetate of lime is not wanted to any extent the principal buyers having completed their supplies, while the export inquiry is unimportant. Prices are without change and we continue our quotations of 1 80@1 85c for brown and 2 45@2½c for grey according to size of order.

Alum is selling freely though principally in small lots for current consumption. The market remains steady at 1¾@1¾c for lump and 1⅞@2c for ground. Sales of 500 bbls are reported within the range. Of Natrona porous we have to report sales of 300 bbls at 2½@2¾c.

Arsenic is still easy under increasing supplies but is not quotably lower, except on forward deliveries which are now available at 2¾@2¾c. There is a limited jobbing demand for spot goods which is met at 2¾@2¾c, but it is possible that these figures would be shaded. Red is selling moderately at unchanged and steady prices.

Blue vitriol is firm and unchanged. Stocks remain light, and with a good jobbing demand nothing is obtainable below 4¼@5c, as to seller quantity and quality.

Brimstone is more inquired for for future delivery and sales of several thousand tons best seconds have been made for shipment since our last, at prices not made public. Quotations for shipments are $17 50@18 50. On the spot there is nothing doing, and quotations remain nominally the same as when we last wrote.

Copperas is dull and easy under accumulated stocks and a continued lack of demand. The nominal quotations are 60@75c, as to quality and quantity.

Cream tartar is in limited request for prompt delivery and we do not learn of much doing in futures. The manufacturers maintain their agreed prices and continue to quote 34½@35c for crystals and 35@36c for powdered according to quantity and style of packing.

Nitrate of soda is steadily tending in buyers' favor under accumulating stocks and a pressure to sell. There is very little demand and the market has a weak and tame appearance. It is reported that sales have been made ex-vessel at 1 75c but 1 80@1 90c seems to be as low as most holders care to go at present but only jobbing sales are possible at these figures. Futures are unsettled and difficult to quote. The condition of the market is reviewed at length on our editorial pages. Since our last the Madura has arrived with 8,691 bags, making the total receipts since the 1st of the month 17,116 bags.

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Soda Ash, Sal Soda, Caustic Soda, Bleaching Powders
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Salt Cake, Oxide Manganese, Chloride Manganese,
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ESSENTIAL OILS,
LEMON, BERGAMOT AND ORANGE, GUARANTEED PURE.

NATRONA BI-CARBONATE OF SODA
(ABSOLUTELY PURE.)

NATRONA

TRADE MARK
SODA

The nature of the raw material from which NATRONA BI-CARBONATE OF SODA is made—viz., Kryolith, a mineral containing pure sodium—insures a purity and uniformity of product which cannot be obtained from any other known material. In making Bi-Carb. Soda from any other raw material, the use of sulphuric acid is necessity, but none is used in any part of the process of making NATRONA BI-CARB; hence its entire freedom from the slightest trace of arsenic, which is always present in ordinary soda. Its absolute purity and entire freedom from all traces of sulphate of soda, common salt, and other impurities, render NATRONA BI-CARB NEARLY TASTELESS, and, being bolted through the finest bolting-cloth, insures the finest state of division.

To those indisputable facts the attention of CONSUMERS of soda is especially called. They are IMPORTANT, and should influence both those who use and those who sell soda, to buy and sell NONE BUT THE BEST.

The NATRONA Bi-Carb Soda is kept in stock by almost every wholesale druggist and grocer throughout the United States of whom may be ordered.

Natrona Bi-Carb. Soda is unequalled by any other brand of English or American Manufacture.
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ST. HELENS, Lancashire.
MANUFACTURERS OF
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Cream Caustic Soda, Bleaching Powder,
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Chlorate of Soda,
AND
CHLORATE OF BARYTA.

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VIRGIN ROCK AND ROLL BRIMSTONE,
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In addition to their well known Chemicals, offer their more recent specialty and already highly popular form of Soda

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SODA ASH.	CHLORATE OF POTASH	CASTOR OIL.
CAUSTIC SODA.	CARBONATE OF POTASH	CAMPHOR.
SAL SODA.	OXALIC ACID.	OIL LEMON.
NITRATE OF SODA.	BRIMSTONE.	OIL BERGAMOT.

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LIVER 72 Per Cent. & 74 Per Cent. CAUSTIC SODA,

HIGH TEST BLEACHING POWDER.

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MANUFACTURERS OF

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Anhydrous Liquid Ammonia

(100 per cent. Ammoniacal Gas Liquified.)

AQUA AMMONIA—all strengths.

We guarantee quality, invite comparison, insure satisfaction.

Correspondence Solicited

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LIMITED.

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MANUFACTURERS OF

Carbonated Soda Ash, 48, 52 & 56%

BLEACHING POWDER and SAL SODA.

Our 48 per cent Ash is manufactured under the NEW PROCESS, expressly for Glass-making. Newcastle test being more liberal than Liverpool, buyers of this brand gain from 1 to 2 per cent. in strength.

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92 WILLIAM STREET, NEW YORK

Ammonias, Potashes and Fertilizing Chemicals.

There have been no signs of improvement in the fertilizer trade during the past week, but it is too early yet to look for much demand, and dealers are quietly and patiently waiting for the opening of the fall season. No new features are presented, and prices for the most part are entirely nominal in the absence of important demand. We continue to quote dried blood at $2 15@2 20 for the low grades and $2 25 for better quality, azotine at $2 20@2 25, fish scrap at $27 per ton f o b on the basis of 12 per cent moisture and tankage at $23@25 per ton flat.

Double manure salt meets with an occasional inquiry but there have been no important transactions and prices are more or less nominal. We continue to quote 1 07½c for lots of 50 tons or over and 1 10@1½c for smaller quantities.

Chlorate of potash has been steadily tending downward during the past few weeks but may now be written steady. There is a fair demand but sales are of unimportant quantities. Either crystals or powdered can now be bought at 15@15¼c according to seller and quantity. French sells to a moderate extent and is steadily held at 15¾@16c. Messrs. J. P. Brunner & Co. writing from Liverpool on the 2d inst say: "Chlorate of potash is in small compass and 6@6 1-16d are nearest values, with a few sales reported at the lower figure."

Kainit does not sell to any extent for though there is considerable inquiry in a quiet way the views of buyers are too low to admit of business. The manufacturers' agents quote $7 50@7 75 for spot lots and $7 25 for foreign invoice or $7 50 actual weight for lots to arrive.

Philadelphia Chemical Market.

PHILADELPHIA July 11, 1887.

Very little of importance has occurred in the chemical market during the past week. The holiday of Monday, combined with the intensely hot weather recently experienced, has even decreased the small amount of trade that has been doing recently. Prices continue at unchanged figures, and arrivals have been very light, but sufficiently large in most instances to supply the demand.

Carbonated soda ash 48 per cent. Liverpool is moving quietly and spot goods are quoted at 1 30@1 40c as to brand. To arrive very little is offering as importers do not care to bring in any large quantities with the glass trade idle. For shipments 1 27½@1 37½c are the ruling quotations with sales of moderate quantities rumored. 58 per cent. is quiet both on spot and to arrive and figures remain the same as last quoted. Newcastle 48 per cent. is in moderate supply on spot and in a jobbing way can be had at 1 25@1 32½c. For shipments holders are naming 1 20@1 25c as to brand and quantity and it is said that lower figures might be obtained on firm offer.

Caustic soda ash 48 per cent is moving along slowly in a jobbing way and holders are asking and obtaining 1 30@1 37½c from store. To arrive same figures are quoted; shipments however can be had as low as 1 25c in round lots.

Caustic soda 60 per cent is held on spot at 2 75@2 82½c and to arrive 2 72½@2 80c will buy as to brand and quantity. 70 per cent is obtainable for prompt delivery at 2 55@2 62½c; to arrive same figures are given. Shipments are quoted at 2 52½@2 60c. 74 and 76 per cent are quiet and unchanged.

Sal soda on spot is firm at 1@1 10, the recent arrivals from Liverpool are firm at 1c. To arrive from Newcastle 92½@95c is named, and sales reported within the range.

Refined alkali, 31 per cent, is to be had on spot at 1 22½@1 30, with light stock and limited demand. To arrive quotations are unchanged, and buyers are not anxious to take hold. B M 48 per cent. came to hand in limited quantities and being all placed on contract, the spot stock is limited to store lots for which holders are asking 1 25@1 30c. On the way there is nothing offering. Shipments are quoted at 1 20@1 25c. B M 58 per cent. is scarce on spot, the stock being limited to the little in jobbers' hands, and quoted at 1 25@1 30c. Shipments are held at 1 20@1 25c, as to quantity.

Bleaching powders are obtainable on spot at 2 00@2 10c with a possibility of these figures being shaded to arrive.

Liverpool.

Under date of June 24, 1887, Messrs. G. & L. Pilkington say:

Bleaching powder is quiet all round. There is some inquiry for hardwood and direct business with the United States is reported at £7 10s per ton f o b Liverpool. Market quotations £7 10s@7 12s 6d, Softwood still hangs fire, pending deliveries to the Metropolitan Board of Works against late tenders for 1,000 tons. £7 7s 6d, rails, is to-day's market quotation. From Newcastle we hear market is quiet at £7 7s@7 10s net cash. For forward we have some inquiry and makers are very firm.

Caustic soda is quiet at £7 16s 3d@7 17s 6d for 70 per cent and £6 16s 3d@6 17s 6d for 60 per cent white caustic soda.

Cream caustic is easier at £6 5s@6 7s 6d on the rails, or £6 7s 6d@6 12s 6d f o b Liverpool, according to make. We have a fair inquiry for forward delivery. We make prices about spot values.

Caustic bottoms unchanged at £4 10s for bottoms from 70 per cent, £4 5s@4 7s 6d from 60 per cent on rails at makers' works. Supplies scarce.

Soda ash continues very quiet. We quote 15-16@1 1-16d for caustic and 31-32d@1 1 16d for carbonated ash. From Newcastle we hear ash is dull at 1d less 1¼ per cent.

Salt Cake—Rather more offering at Widnes, where we make the price 23s 6d@24s. At St. Helens value is 24s 6d@25s according to make, with but little at lower figure.

Soda crystals scarce and firm, the hot weather interfering with the manufacture as well as improving the demand. We make the market £2 12s 6d@2 15s f o b Liverpool in 3 cwt casks, with makers well sold for early delivery. From Newcastle we hear market is steady at £2 2s 6d @2 3s per ton gross weight, net cash.

Chloride of Calcium—£2 5s per ton f o b Liverpool or £2 2s 6d per ton on rails Widnes in iron drums or wooden casks about 5 cwt each, for prompt or forward shipment.

Bicarbonate of soda quiet at £6 5s@6 10s per ton f o b Liverpool in 1 cwt kegs. These prices might be shaded for a quantity.

Chlorate of potash quiet at 6@6 1-16d.

Nitrate of soda quiet at 9s@9s 3d.

Sulphate of ammonia advanced to £12 7s 6d Liverpool, £12 10s Hull.

Phosphate Rock Shipments.

The following shipments of phosphate rock from Charleston, S. C., during June, 1886, and 1887, are furnished by Mr. P. C. Trenholm of that city:

DOMESTIC.

	1886 Crude.	1886 Ground.	1887 Crude.	1887 Ground.
Baltimore	3,748	....	6,520	....
Philadelphia	2,286	....	4,511	...
Wilmin'n, Del.	....	....	780	....
Barren Island	..	....	775	....
New York	1,347	150	1,384	330
New Town Cr'k	200	514	....	.. ..
Wilming'n, N C.	69	...	765	....
Weym'th, Mass.	900	....	1,000	....
Union Ldg, N.J.	....	....	566	...
Mantua C'k N.J	....	....	895	...
So Ca RR west.	669	....	831	...
C & S RR	....	2,021	....	1,459	....
*N E RR, So Ca.	103	....	89	.. .
Total	11,283	664	19,505	330

FOREIGN.

United K'gdom.	775	....	....	....
Reval	50	....	....	....
Cronstadt	125	....	.. .	....
Cork	....	....	510	....
Total	950	....	510	....

*Received N E RR's of June '86 after report of Sept. '86 was made out.

A Remarkable Rock Salt Deposit.

A correspondent of the New Orleans *Times-Democrat* describes in a recent issue, how the famous rock salt deposit—that wonderful geological formation at Avery's Island in southern Louisiana on the Southern Pacific railroad—was discovered and mined. It is without a parallel in the world. The correspondent writes: The mine thus far has been worked to a depth of 160 feet below the surface of the

1858 1887

Welch, Holme & Clark,

COMMISSION MERCHANTS

AND DEALERS IN

Druggists' and Soap Makers' Materials.

Soda Ash, Rosin,
Caustic Soda, Pearl Ash,
Sal Soda, Turpentine,
Potash, Grease,
Palm Oil, Tallow,
Cocoanut Oil, Cottonseed Oils

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HOOF OINTMENT.

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AND
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RICHARD C. REMMEY Agt.

Philadelphia Chemical Stoneware Manufactory
1100 East Cumberland St., Phila., Pa.

Manufacturer of all kinds of Chemical Stoneware for Manufacturing Chemists Also Chemicals Bricks for Glove Tower.

WOOD ALCOHOL
Acetone, Acetate of Lime,
BLACK LIQUOR,
WOOD EXTRACT CO.,
OFFICES AND WORKS
NORTH EAST, MD. LUTHER, MICH

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Analyst, Soap and Oil Specialist, &c.
May be consulted on all matters pertaining to fat products, and their economical utilization, refining, perfecting of processes, planning of works for such purposes, etc. He has also several processes for disposal—for the production of a good cheap article under their various heads.
CORRESPONDENCE SOLICITED.
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Analytical and Consulting Chemist.
Experimental Investigations in all Branches of Technical Chemistry. Analyses of Ores, Metals, Fertilizers, Waters, Coal and Commercial and Technical Products.
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Manufacturers Passaic Chemical Co. 85 John St., New York

BAUXITE
(Hydrate of Alumina-Alum Clay)
LUMPAND GROUND.
IRISH HILL BRAND.
Highest in Alumina, and Lowest in Iron produced
Best article wherefrom to Manufacture
Alum, Sulphate of Alumina, Alum Cake, &c.
Mines & Mills, Nr. BELFAST & LARNE.
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SOLE AGENT, PROPRIETORS.
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Successor to GEO. BINNS Sr.,
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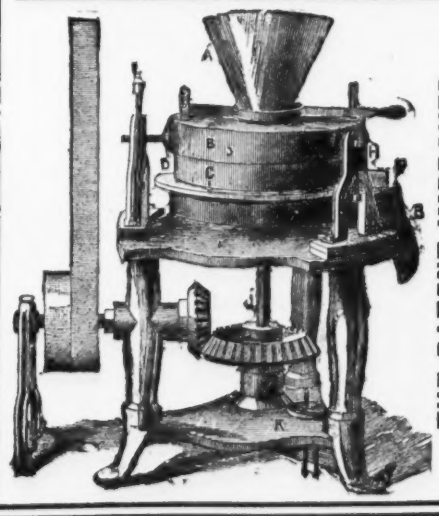

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Paint and Color Mills,
THOMPSON & CAMPBELL,
Successors to KREIDER, CAMPBELL & Co.
1030 Germantown Ave., Philadelphia.
MANUFACTURERS OF
ALL KINDS OF PAINT MACHINERY.
Contracts taken for new work, entire or in part.

"THE SKULL" BRAND
CAUSTIC SODA.
Mort, Liddell & Co. Widnes, England.
Agents at New York, SYKES & STREET, 21 Cedar St.
Agents at Chicago, KENLY & JENKINS, 12 & 14 Franklin St.

earth. The first excavations were made on a 90 foot level and extended over an area of about eight acres, but work has been discontinued for some time past on this level, the distances from the shaft becoming inconveniently great for the underground transportation of the salt. The floor of the second level is 70 feet below that of the first, and the excavations upon this, begun about two years ago, cover approximately one acre. As there is a stratum of about 20 feet of earth on top of the salt deposit, it will be seen that its thickness thus far penetrated perpendicularly is about 140 feet. Now, investigations have disclosed that the salt deposit on Avery's Island covers an area of about 142 superficial acres, and assuming as a basis of calculation the mere depth thus far attained, I may state that the salt, practically in sight, is a mass 142 acres in area by 140 feet in depth--at a rough calculation, about 61,000,000 tons. This represents in weight almost the aggregate of cotton crops of forty successive years of 7,000,000 bales each, and at the present highest output of the company's works, say 8 0,000 pounds or 400 tons per working day, its entire removal would require a period of 490 years! As to bulk, imagine a space about four times as large as that covered by the main building of our late Exposition heaped up evenly with salt nearly three fourths as high as St. Patrick's steeple, and your readers can somewhat grasp the idea of the enormous mass.

How much further down than the present excavation the salt extends, no one knows; certain it is that nothing so far has been discovered in the mine to indicate, in the slightest degree, any symptoms of exhaustion downwards. The company are now on the point of taking steps to effect a boring in order to ascertain the actual depth of the deposit, and some highly interesting geological data are likely to accrue from the experiment. In some of the salt mines of Europe, notably those at Wieliczka,, in Polish Austria, the excavations have been carried down as deep as 1,200 feet. In this country, rock-salt is found in quantity only in two other places; at Holston, Va., and near Petford, N. Y., and neither of these two mines begins to approximate that of Petit Anse in extent. In view of this fact, is it no a noteworthy instance of the neglect until of late years too often manifested with regard to the resources of the South, that in the third revised edition (N. Y., 1879) of Dana's Manuel of Geology, the standard handbook on that subject, no mention at all is made of the wonderful salt deposit of Avery's Island?

Clays Chemically Considered.

It has been stated, and truly, too, that a precise as well as an intimate knowledge of all matters pertaining to the arts or industries for which we are in training or have been educated is of special importance at the present time, because of the influence of the minute subdivisions of labor which economy in production has forced upon us, together with that world-wide competition which renders the merest fractional difference in the cost of production of gigantic importance when the final footings are made and profits determined.

With the subject now under consideration there is one process (Frisenuth's) which has been inadvertently overlooked when extracting the alumina, and it differs from the other methods described. Deville simply converts the alumina into chloride of aluminum by passing chlorine through a heated mixture of alumina, carbon and common sodic chloride in a retort, by which means the chloride is distilled and recovered, and is then acted on by soda on the hearth of a reverberatory furnace. Frismuth, however, converts the alumina in the form of corundrum, bauxite, &c., into fluoride by using the mineral with fluoride of sodium subsequent to heating it with fluorspar. The fluoride of aluminum and sodium so obtained is then powdered, intimately mixed with carbon and with the chlorides of sodium and potassium, and placed in a false-bottomed retort. Connected with this retort by a suitable pipe is another, into which is introduced carbonate of soda, carbon—in the form of charcoal—and lime. When the retorts are heated the vapor of sodium passes from the retort containing the soda mixture, which must be at a white heat, through the mixture containing the fluoride of aluminum and sodium, separating the aluminum. Of course the operation may be varied by converting the fluoride of aluminum into chloride and treating that with sodium in the same way as with the fluoride. The description of the process for producing aluminum from kaolin by means of mixing the so-called "zinc ore" carbon, kaolin, pearlash and sodic chloride, and subsequently distilling off the zinc and aluminum, to be afterward treated and separated, reads well; but subjected to close analysis it is too vague to be clearly understood, besides which there seems to be a well-defined purpose to mislead inquiry and bury some of the minutiæ in verboseness.

Regardless of means or production and where made, the ultimate product is a subject of divergence. As to alum itself, one of the most remarkable differences is that of the solubility of water. With three species, at a temperature of 60 deg., 100 parts of water will dissolve

9 57 parts of ammoniacal alum,
14 79 " potash alum, and
327 6 " soda alum.

This property alone renders the manufacture more difficult than it would otherwise be, especially for soda alum, and during hot weather it is next to impossible to make it crystallize, but the very property which causes the difficulty of manufacture enhances its value for most purposes, and even at the increased cost it is in good demand.

The three species of alum mentioned in the foregoing may be detected quite readily by means of their specific gravity, and all concerns should be prepared to make this test. The following is a fair statement of gravity:

Ammoniacal alum	1·56
Potash alum	1·75
Soda alum	1·89

Subsequent investigations and experiments with our native bituminous shales seem to show that alumina sulphate, as well as alum itself, can be made with profit here from this by-product. In the vicinity of Glasgow, Scotland, these shales, as obtained from the coal-pits, are successfully worked up. The air in these pits is moist, with an average temperature of 62 deg Fah; the shale having been exposed for many years, has gradually opened in the direction of its slaty fracture, resembling a half-shut fan, and all of the chinks are filled with a saline efflorescence in threads. The salt is white, with a shade of green; it has a sweetish astringent taste, and consists merely of a mixture of sulphate of iron and alumina, while in some of our older mines the solution is the same, although much richer, and in order to obtain these salts in a watery solution it is only necessary to lixiviate the shale with water. The lixiviated ore being left exposed to the weather forms more salt, which is gradually washed out by the rain-water. This, being collected, is treated as will be described further on.

For uses in paper manufacture there has been no little hue and cry raised regarding clay as an adjunct, but if we take into consideration clays so used as examined beneath the microscope, it will be noticed that the minute interstices existing among the mass of fiber are all filled up, leaving the fabric glossy and smooth, whereas naked or pure fiber will be found spongy in appearance and will not take any kind of ink, writing or printing, without breaking lines.

Paper treated with alumina will withstand the adverse influences of variable temperature much better than if it is not used, for the very fact that the interstices are filled up renders the goods impervious, to a great extent, to these influences, so that paper containing clays are better for future use than those which do not contain them.

The use of other minerals, such as talc, spar and the like, instead of clay, seems to be increasing. It has been stated that talc gives a much higher finish to paper. This mineral abounds in many States; it is of itself a fiber, and will permeate the other fibers, holding them together mechanically besides filling up the holes.

I have been asked a number of times to state why one alumina is superior to another when both are made in the same manner. This is doubtless due to some imperfections during the process of manufacture which escaped the eyes of the attendant. It should be borne in mind that the least bit of divergence shows much difference in products; for instance, we take alum alone—it being from alumina—we find that

One gallon water at	54	deg. F.	dissolves	1	pound.
"	"	"	"	86	"	"	2	"
"	"	"	"	140	"	"	3	"
"	"	"	"	158	"	"	9	"
"	"	"	"	213	"	"	35	"

In the use of the sulphate the sulphuric acid has such a strong attraction for the alumina that it often deteriorates, but in manufacturing, if all of the acid is neutralized save that actually necessary to hold the alumina, this difficulty will not occur, but for our purpose probably the acetate is used to a greater extent than all others. It has several advantages, one of which is that an acetate is not so harmful to vegetable fiber as the sulphates.

A pure salt of the acetate of alumina may be boiled without decomposition, but if we use sulphate of potash or any other neutral salt of an alkali the solution becomes turbid. This should be remembered when used for tinting, or rather fastening tints. *Paper Trade Journal.*

Soaps and Soap Making.

BY G HUTCHISON.

(Continued from June 29, page 10.)

Glycerine was first noticed by Scheele, and at that time was obtained in the greatest quantity and purity by saponifying olive oil with oxide of lead mixed with a little water. This is the well known process of preparing what is called diachylon or lead plaster, which is in fact a metallic soap, or a margarate and oleate of lead. The glycerine, which remains in combination with the water, is purified from oxide of lead by means of hydrosulphuric acid, and by cautious evaporation is obtained as a syrupy liquid of a decidedly sweet taste.

Many processes have been published from time to time, more or less reliable and efficacious, but the following may be looked upon probably as useful as any for the extraction of this most useful and valuable product, glycerine, from soap boilers' lye containing salts.

The lyes are neutralized and evaporated as much as possible. A large proportion of the salts is separated in solid form; this is removed and washed with neutralized lye. The fluid containing the glycerine is again evaporized with such a quantity of oleic acid, or of trioleins, as oil, tallow, lard, &c., that the mixture contains to every molecule of glycerine somewhat more than one molecule of oleic or sebacic acid. The compound is first heated in a still to 338 deg. F. by steam and then gradually to 392 deg. F., whereby the air may be excluded by introducing carbonic acid. A still provided with a stirring apparatus is used. Water escapes, which may be partly present as such, and is partly liberated as a decomposition product. The monolein thus formed is saponified with lime. A solution of glycerine in water is obtained, from which commercial glycerine is gained by evaporation. A lime soap is also produced, which after having been freed from acid, may be again used.

Probably the purest glycerine obtainable is produced by a process as follows: Palm oil is placed in a distilling apparatus and high pressure steam of 500 deg. to 600 deg. F. introduced. The palm oil is decomposed and two layers are obtained in the receiver; one watery containing the glycerine and one upon which floats the fatty acids. Caution must be exercised during this operation that there is a constant supply of steam and that the temperature does not rise too high, as, if this is the case, acrolein may be formed. By concentrating, and should the product not be entirely colorless, repeated distillation, the glycerine can be obtained pure of 1 26 specific gravity.

The uses to which glycerine may be put are many and various—and these are increasing every day. Although not used to a great extent in the chemical industries as a solvent, glycerine is of considerable service for this purpose in pharmacy.

Glycerine is largely used in sizing and dressing goods. To load and oil the wool the following mixture is used: Rosin and aqua ammonia free from lime, each one part by weight, and water ten parts by weight are mixed, filtered through a cloth, and half the quantity by weight of fat oil added and then the whole quantity by weight of glycerine This mixture is reduced half with water and used for oiling the wool. It is also much used as a solvent for aniline colors, being capable of dissolving a large quantity of them, and at a lower temperature than alcohol. Its power of dissolving albumen makes it especially adapted for calico printing.

[To be continued.]

Raw Basic Slag and its Effects as a Fertilizer.

[Written for the *Engineering and Mining Journal* by Francis Wyatt, Ph.D]

Some fifteen years ago, Kuhlmann discovered that ammonia underwent dissociation, when passed through a platinum sponge in a current of air, the combustion of its two elements causing the sponge to become incandescent.

He concluded from this that any of the porous bodies of the soil would induce the same kind of action in a milder form.

The experiments of Boussingault upset this theory; but while he failed to produce any effect from a mechanical mixture of ammoniacal substances in sand and chalk, the latter chemist observed that the same mixture introduced into cultivated ground immediately induced nitrification. Confirmed by more recent investigations, the fact betrays an action peculiar to the soil, and now known to originate with fermenting micro-organisms for, while it may be stopped either by abnormal heat or by the influence of chloroform vapors, the subsequent admixture of any kind of soil in which vegetation is proceeding will cause it to be resumed. The propagation of these atmospheric germs is retarded or increased in accordance with the variations of temperature and moisture, and the proportion of ammonia by which they are surrounded. Thus, warmth, plowing, or harrowing, all greatly increase their activity and cause a good soil, rich in organic remains or loaded with vegetable or animal manures, especially in the presence of lime, to produce so much more nitrates than are needed by the growing crops, that a large quantity sinks into the subsoil and becomes lost.

Interesting examples of this phenomenon are afforded by the Rothamstead experiments, where the analyses of the field drainings have shown that constant nitrification has gone on, equally well under similar conditions, regardless of the form in which the nitrogen was applied.

Although, because of its momentary advantages, many *quasi* scientific farmers rejoice over this abnormal state of affairs, it cannot be regarded by any profound thinker as other than a source of great future difficulty and danger, inasmuch as the combustion of nitrogen can only take place simultaneously with a chemically-regulated, proportionate combustion of carbon, and this means the exhaustion of organic matter in the soil.

Returning now to our basic slags, a reference to our last paper will show its average composition to be as follows:

P_2O_5	20·00	MnO	6·00
CaO	48·00	MgO	4·00
Fe_2O_3	13·00	AlO	2·00
SiO	6·00	CaS	1·00

*Equal to 52 per cent. $4CaOP_2O_5$.

In other words, with every 100 pounds of the material, we introduce into the soil 16 per cent. of free lime, and 23 per cent of other mineral protoxides, and it is the effect such an application is likely to produce that demands our study.

The liming of cold soils has been a common practice in all countries from the very earliest times; but it was presumably not until the seventeenth century that the use of burnt lime, now so universal, was commenced. It is employed in quantities varying with the composition and requirements of a soil, from twenty tons per acre into those which are cold, heavy, compact, and laden with moisture, to three tons per acre, into those which are light and of a drier nature. Its scope of utility or range of action cannot be gauged by the relatively small proportion found in the plants and it is questionable whether its presence in their organisms is directly connected with their nourishment and growth, or whether it is to be explained by the mere evaporation of the water, by which it was conducted into the tissues, and there deposited. However this may be, the quantity absorbed is out of all proportion to the quantity employed, as may be gathered from the following figures:

Quantity of lime absorbed per acre by the undermentioned cultivated plants:—

Potatoes.	Wheat.	Beets.	Clover.
7 lbs.	20 lbs.	18 lbs.	70 lbs.

It is not therefore in this direction, but in that of its oxidizing influence upon all organic remains, that we have to seek for its true chemical action. When vegetable matter is burnt, it gives off the sickening vapors characteristic of calcined, putrid animal substances, but if to the burning mass there be added a small quantity of lime, the well known odor of ammonia at once becomes perceptible. In a similar way the introduction of powerful oxidizing agents into ordinary vegetable soils hastens the combustion of their decaying principles and entails the too rapid transformation of their hydrogen and nitrogen into free and volatile ammonia.

When we deprive a soil of its organic matter, we take away the most precious of all its elements, for in addition to many other important functions, it performs the one of retaining humidity, and thus enables plants to withstand periods of drought which otherwise would kill them.

To preserve its presence, due attention must be paid to the rotation of crops. Grasses and clover must be periodically grown, and as much stable manure as may be available, regularly applied. Failing these precautions, the carbonaceous matter will be all burnt up, and we must inevitably in many cases reach a period of sterility which even the copious use of expensive nitrogenous chemicals will not ward off.

The great problem with which science has already to deal, is how and whence assimilable nitrogen may be obtained to make up for the increasing dearth of natural materials, and it is in the use of such expensive chemicals as nitrate of soda, and ammonium sulphate, that the only practical solution has yet been found. If we put aside those humiferous or virgin lands, morasses, or marshes in which the use of free lime is necessary to give an impetus to the process of nature, and confine our present arguments to such soils as are constantly under culture and therefore chiefly in need of delicate and intelligent manipulation, we shall find that in the majority of cases the use of raw basic slag, so warmly advocated by Dr. Wagner and his co-experimenters, will naturally and inevitably entail misfortune.

If it be applied to lands that are usually treated to sulphate of ammonia, it will at once promote an action of which the following is a type:

$$(NH_4)_2SO_4 + CaO = CaSO_4 + H_2O + 2NH_3.$$

If it be added to soils where a system of crop rotation or farm yard manuring is chiefly depended upon for the necessary nitrogen, it will produce a similar decomposition by burning up the organic matter.

It is true that during the first, perhaps during the second, period of its application a very flourishing crop may be produced if the circumstances of its surroundings be favorable to its action, but we have said enough to show that this abnormal stimulation can only result from the irreparable loss of the one great agent of fertility which we are at most pains to acquire.

To sum up our proposition, unless it can be satisfactorily shown that our notions of chemical action are entirely misconceived, the result of a general and indiscriminate substitution of raw basic slag for the other phosphatic materials with which it has been compared may be strikingly shown by a simple calculation on the short ton basis.

One ton of raw powdered basic slag contains 20 per cent P^2O_5, worth $1 per unit=$20. Taking its 16 parts free lime as equivalent to 9·71 parts ammonia gas and its 23 parts mixed protoxides as equivalent to 12·37 parts ammonia gas, every ton of slag plowed into such soils as we have described will set free 22·08 parts ammonia gas.

This quantity of ammonia gas being the equivalent of one ton of commerbial ammonium sulphate, it is perfectly plain that each ton of slag, besides bringing about the premature sterility of the soil, drives off sixty dollars worth of readily assimilable nitrogenous plant food into the air.

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Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

The prices current will be found on page 50.

TUESDAY EVENING, July 12, 1887.

Nothing specially new has developed itself in the market for dyes and dyestuffs. The majority of the articles are firmly held, while a few are weak, and altogether a quiet week only can be reported.

Albumen—The trading during the past week has been light. Dealers, however, are looking forward to a good fall trade and also to an advance in prices, owing to the fact that the colors for fall will require more of this article than is generally the case. Quotations continue at last week's figures and are for dry No. 1, 15@16c and for egg 35@38c is the price quoted,

Aniline colors—The business for the present month has not been up to what it promised at the beginning of the month and the trading has been lighter during the past week. The market is virtually in buyers' hands. The business doing is only moderate.

Artificial Alizarine—This article has continued fairly active, and sales are being made at our previous quotations. It is reported that goods have been bought at 17c, and it is also said that sales have been made at less, but this is doubted by dealers generally. Advices from abroad quote the English at 9d f o b Liverpool. Our former quotations of 18@19c still rule.

Bichromate of Potash Very little is doing in the article, and the market must be reported as quiet. Our former quotations are still the ruling prices, and are as follows: 10½c on orders of 5 cks, but for smaller lots a higher price would be asked. Bichromate of soda continues to be quoted at 8¼c for 5 cask lots, but has only been in light request.

Cochineal—Though a steady market is reported, this article is very quiet and very little business is doing. The following are the nominal quotations: 30@31c for Teneriffe silver, 31c for black, and 34@36c for grey black.

Cutch—The market for this artic'e is very firm, though on the whole quiet. The Regent has arrived with supplies, and sales of 200 bags from her are noted at 7⅜c. The following figurgs represent the market: Diamond S. M., on spot is quoted at 7¾@8c, and Star "B" at 7½@7¾c. To arrive, Diamond S. M. is quoted at 7⅜@7½c. M. M. slabs are quoted at 6¼c and R S. slabs at 6¾c.

Divi Divi—The market for this article is very firm, and there are no stocks arriving. The trading, in consequence of scarcity of supplies, is only moderate. The quotations to-day are $50@65.

Dyewoods—There is a good demand existing for dyewoods, but the supply is inadequate and very few arrivals are noted. The following continue to be the ruling quotations: Hayti logwood from the north side $29, from the south side $25, and Laguna logwood at $35. The market on Mexican fustic is firm and the quotation at $23. On dyewood extracts the market is firm at the advance, and a very fair demand is existing at the following prices: The quotations are: Liquid 51 deg. logwood at 5¾@6½c for domestic and 6½@9¼c for imported; 42 deg. 5½@5½c; fustic at 8@9½c for 51 deg. and 8¼@9c for 42 deg. Solid logwood is held at 8½@9c, and solid fustic at 10¼@11½c. Sumac extract is quotable at 4@10c for liquid 51 deg. and 8c for solid; hypernic at 15@16c for 51 deg. and 20@24c for solid.

Gambier—The market for this article is very firm at former figures, but higher prices are looked for owing to the heavy consumption. The Mystic Belle and Titan have arrived with supplies. There have been sales of 150 tons divided about equally between the two vessels at 5c cash, though the quotations ex vessel are 5@5¼c. The quotations ex store are 5¼@5½c.

Indigo—The market for this article has continued quiet and devoid of interest. The Regent from Calcutta has arrived with 84 chests, all of which, however, are sold to arrive. The quotations continue as follows: 90c@$1 for low grade Bengals, $1 10@1 25 for medium and $1 24@1 40 for fine. Madras remains quiet at 36@55c.

Nutgalls—The market for galls remains quiet with little trading being done. There has been an arrival of 80 bgs Aleppo. The following continue to be the ruling quotations: 15@15½c for Aleppo and 14c for China.

Prussiate of Potash—Cincinnati manufacturers have advanced the price of yellow to 20c. There is no special demand existing, the market, on the contrary, being quiet. The market on foreign shows no special features and is quiet. The position of the market for red is practically the same as last week, stocks being neglected. The following are the nominal quotations: 42@42½c, according to quantity.

Sumac—The market for both Sicily and Virginia is quiet and there is very little business doing. Sicily is quoted at $67½@72½, and Virginia at $50@55.

Tin Crystals—Owing to the price of pig tin, crystals are very firm at current quotations. The demand has been moderate at the following prices: 15½@16c.

Hong Kong.

Under date of June 2, 1887, Messrs. Russell & Co. say:

Kerosine Oil.—Since the despatch of our last, the the demand has been comparatively less active, but prices are maintained at $1 65 per case for immediate clearance ex godown, at which figure the market closes firm. The Sonntag arrived on 25th ultimo with 33,720 cases Comet, of which about 5,000 cases have already been placed at $1 65½ per case ex ship. Including this arrival, stocks are now estimated at about 120,000 cases, which are by no means excessive, if the fair demand existing and the very moderate supplies on the way are taken into consideration.

Quicksilver.—Beyond a sale of 300 flasks at $79 25 per pecul, nothing of interest or importance has occurred. There is scarcely any demand at the close and in sympathy with lower prices at home, the market is weak at $79 per pecul for spot cargo.

Lead.—The demand has been slack throughout the interval and prices are maintained with difficulty. Small lots of L. B. have changed hands at $5 22½@5 20 per pecul, and we quote the latter figure as current rate, with a dull feeling in the market.

Camphor.—Sales of 300 peculs are reported at our figures, leaving about 200 peculs in stock. The market closes quiet but steady at $17 for Fomosa and $18 75 for Japan.

Star Aniseed.—Remains in exactly the same position as last reported, with no stock of good quality and quotations quite nominal at $22 50 @23 per pecul.

Star Aniseed Oil.—A few parcels could be bought at $250 per pecul, but there is no demand at the figure. Supplies of new season's oil are shortly expected.

Chasia Oil.—Sales are reported at $98 per pecul, but an advance on this figure is now demanded.

Galangal.—Is firm at $1 60 per pecul with sales of 100 peculs and about 500 peculs in stock.

Saigon Cassia.—Nothing doing; nominal quotation is $47 per pecul, with about 100 peculs in stock.

Under date of June 1, 1887, Messrs. Arnhold, Karberg & Co. say:

Star Aniseed—Nominal. No demand for export.

Star Aniseed Oil—Supplies to the extent of 10 piculs have arrived and found buyers at $270. The article remains exceedingly scarce and the market closes firm at quotation.

Cassia Oil—Fifty piculs changed hands at quotation, leaving an unsold stock of about 20 piculs, which is held for same price. The demand has somewhat improved.

Galinuts—The stock has been cleared at about Tls12-12 10, and the season is now drawing to a close. At Hangkow the quotation is equal to Tls12 50.

Formosa Camphor—No stocks. Japan Camphor—There is more demand for shipment to India, buyers offer $18 25@18 50 per picul, while holders now ask $19. Stocks being small and supplies moderate, buyers will probably have to grant the enhanced rates. Saigon Cassia—Small supplies have reached the market, and holders are disposed to realise at $45 per picul rolls, but there is no inquiry on account of unsatisfactory advices from the States.

Vermilion—Quotation $37 75 per box of 50 cattles.

Antwerp.

Under date of June 18, 1887, Messrs. Jules Souheur & Co. say:

Petroleum Oil—American refined; This market opened exceedingly firm during the first two days of the week, but the tone became less steady later and closes weaker. Closing quotations are: Spot fr15, month fr14⅞, July fr15, August fr15⅛, last 4 months fr15⅜ per 100 kos.

	Bbls.
Delivered during week.....	8,000
Stock in Antwerp this day.....	77,426

Empty American refined petroleum casks are worth fr 4 15, first cost.

Naphtha is quoted at fr30¼ per 100 kos.

Vegetable Oils—Linseed fr50½@51. Rapeseed: Brown fr52½, refined fr57 per 100 kos. Olive: Seville fr86, Genoa fr 72@73. Cocoanut: Cochin fr82@84, Ceylon fr68@73. Palm oil fr50 @52 per 100 kos.

Turpentine—American spirits fl17¼ on the spot; July fl16¾. French spirits fl16 per 50 kos.

Resin—Good strained American is quoted at fr8¼ per 100 kilos.

Chemicals—Ashes, pot, 1st sorts, Montreal, fl17¾. Cream of tartar fl170@175 per 50 kos. Sal soda fr15@19. Nitrate of soda fr22. Refined saltpeter fr90@92 per 100 kos.

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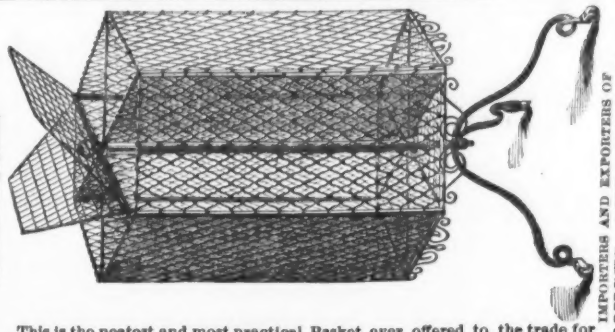

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